Project/Site: Cumberland	County Property	City/County: _	Cumberland	d County	Sampling Date: 3/	/29/2018
Applicant/Owner: CWV, LLC; ca	/o James H. Martin			State: VA	Sampling Point: _	
Investigator(s): Shannon D		Section Town	shin Range:		3ampiing 1 omi -22	
Landform (hillslope, terrace, etc		<u>-</u>				%)· 2-4%
Subregion (LRR or MLRA):						
Soil Map Unit Name: Poinde			Long	NWI classific		
		'- (' x (X	NI-			
Are climatic / hydrologic conditi				(If no, explain in R		
Are Vegetation, Soil					present? Yes X	_ No
Are Vegetation, Soil	, or Hydrology	naturally problematic?	(If needed, e	explain any answe	rs in Remarks.)	
SUMMARY OF FINDING	GS – Attach site map	showing sampling	point location	ons, transects	, important feat	ures, etc.
Hydrophytic Vegetation Prese	ent? Yes X I	No le the	Sampled Area			
Hydric Soil Present?		10 1110	a Wetland?	$_{Yes}$ $ imes$	No	
Wetland Hydrology Present?		No			_	
Remarks:						
Data point was taken r	next to flag A-70.					
HYDROLOGY						
Wetland Hydrology Indicato				Secondary Indica	ators (minimum of two	required)
Primary Indicators (minimum	of one is required; check all	that apply)		Surface Soil	, ,	
Surface Water (A1)		ue Aquatic Plants (B14)			getated Concave Surf	face (B8)
X High Water Table (A2)		drogen Sulfide Odor (C1)		X Drainage Pa	tterns (B10)	
Saturation (A3)	Ox	idized Rhizospheres on Li	ing Roots (C3)	X Moss Trim L	ines (B16)	
Water Marks (B1)	Pre	esence of Reduced Iron (C	4)	Dry-Season	Water Table (C2)	
Sediment Deposits (B2)	Re	cent Iron Reduction in Tille	ed Soils (C6)	Crayfish Bur	rows (C8)	
Drift Deposits (B3)	Thi	in Muck Surface (C7)		Saturation V	isible on Aerial Image	ry (C9)
Algal Mat or Crust (B4)	Oth	ner (Explain in Remarks)			tressed Plants (D1)	
Iron Deposits (B5)				X Geomorphic	Position (D2)	
Inundation Visible on Aer				Shallow Aqu		
X Water-Stained Leaves (B	39)			Microtopogra	aphic Relief (D4)	
Aquatic Fauna (B13)				FAC-Neutral	Test (D5)	
Field Observations:						
Surface Water Present?	Yes No X De	epth (inches):				
Water Table Present?	Yes <u>X</u> No De	epth (inches): 6"				
Saturation Present?	Yes No _X_ De	epth (inches):	Wetland F	Hydrology Preser	nt? Yes $_{oxdot} imes$ N	lo
(includes capillary fringe) Describe Recorded Data (stre	oom gauga, manitaring wall	agrial photos, provious in	spections) if ava	vilable:		
Describe Necolded Data (Sile	an gauge, monitoring well,	, aeriai priotos, previous iri	spections), ii ava	allable.		
Demonto						
Remarks:						

/EGETATION (Five Strata) – Use scientific na	imes of	plants.		Sampling Point: DP-1
	Absolute	- Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 20'x20') 1 Acer rubrum	% Cover 20%	Species?	Status	Number of Dominant Species
		YES	FAC	That Are OBL, FACW, or FAC: 6 (A)
2. Betula nigra	15%	YES	FACW	Total Number of Dominant
3				Species Across All Strata: 6 (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 100% (A/B)
6				, ,
	35%	= Total Cove	er	Prevalence Index worksheet:
50% of total cover: 17.5	 % 20% of	total cover:	7%	Total % Cover of: Multiply by:
	<u>/0</u> 20% 01	ioiai covei.		OBL species x 1 =
Sapling Stratum (Plot size: 20'x20') 1 Carpinus caroliniana	20%	YES	FAC	FACW species x 2 =
·· ·	20 /0	11.5	170	FAC species x 3 =
2				FACU species x 4 =
3				UPL species x 5 =
4				Column Totals: (A) (B)
5		· <u></u>		Coldini Totals (A)
6				Prevalence Index = B/A =
	20%	= Total Cove	er	Hydrophytic Vegetation Indicators:
500/ // 10%				1 - Rapid Test for Hydrophytic Vegetation
50% of total cover: 10%	<u>20% of </u>	total cover:	4 /0	2 - Dominance Test is >50%
Shrub Stratum (Plot size: 20'x20')				
1				3 - Prevalence Index is ≤3.0¹
2				4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
3				
4				Problematic Hydrophytic Vegetation ¹ (Explain)
5				
6				Indicators of hydric soil and wetland hydrology must
<u>. </u>		= Total Cove		be present, unless disturbed or problematic.
				Definitions of Five Vegetation Strata:
50% of total cover:	20% of	total cover:		Tree – Woody plants, excluding woody vines,
Herb Stratum (Plot size: 20'x20')				approximately 20 ft (6 m) or more in height and 3 in.
1. Vaccinium corymbosum	15%	YES	FACW	(7.6 cm) or larger in diameter at breast height (DBH).
2				Sapling – Woody plants, excluding woody vines,
3			l	approximately 20 ft (6 m) or more in height and less
4				than 3 in. (7.6 cm) DBH.
5.				Shrub – Woody plants, excluding woody vines,
6.				approximately 3 to 20 ft (1 to 6 m) in height.
7				Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody
8				plants, except woody vines, less than approximately 3
9				ft (1 m) in height.
10				Woody vine All woody vines regardless of height
11				Woody vine – All woody vines, regardless of height.
	15%	= Total Cove	er	
50% of total cover: 7.5°	% 20% of	total agyar:	3%	
	20% 01	iolai covei.		
Woody Vine Stratum (Plot size: 20'x20')	200/	VEC	EAC	
1. Smilax rotundifolia	20%	YES	FAC	
2. Vitis riparia	10%	YES	FACW	
3				
4				
5.				
	30%	= Total Cove	er	Hydrophytic Vegetation
150/				Present? Yes X No
50% of total cover: 15%		total cover:		
Remarks: (Include photo numbers here or on a separate si	heet.)			

Sampling Point: DP-1

Depth	Matrix			x Features				
(inches)	Color (moist)	<u>%</u>	Color (moist)	%	Type ¹	Loc ²	Texture Remarks	
0-4	10YR 3/3	100	-				Sandy Loam	
4-18	10YR 7/2	90	7.5YR 5/6	10	С	PL	Sandy Loam	
							·	
¹ Type: C=Co	ncentration, D=De	pletion, RM	=Reduced Matrix, M	S=Masked S	and Gra	ins.	² Location: PL=Pore Lining, M=Matrix.	
Hydric Soil I	ndicators:						Indicators for Problematic Hydric Soil	ls³:
Histosol			Dark Surface				2 cm Muck (A10) (MLRA 147)	
	ipedon (A2)		Polyvalue Be					
Black His			Thin Dark Su Loamy Gleye			47, 148)	(MLRA 147, 148) Piedmont Floodplain Soils (F19)	
	n Sulfide (A4) Layers (A5)		Loamy GleyeX Depleted Ma	•	.)		(MLRA 136, 147)	
	ck (A10) (LRR N)		Redox Dark				Very Shallow Dark Surface (TF12)	
	Below Dark Surfa	ce (A11)	Depleted Da	, ,			Other (Explain in Remarks)	
	rk Surface (A12)		Redox Depre					
	ucky Mineral (S1)	(LRR N,	Iron-Mangan		(F12) (L	RR N,		
	147, 148)		MLRA 13	•	I D A 40	. 400\	31	لمما
	leyed Matrix (S4) edox (S5)		Umbric Surfa Piedmont Flo				 Indicators of hydrophytic vegetation a wetland hydrology must be present, 	ına
	Matrix (S6)		Red Parent I					
	ayer (if observed):			/ (,	, amos distance of presidentalis.	
Type:		-						
Depth (inc	:hes):						Hydric Soil Present? Yes X No	
Remarks:								

Project/Site: Cumberland Cour	nty Property	City/County: Cur	nberland County	_ Sampling Date:3/29/2018
Applicant/Owner: CWV, LLC; c/o Ja				Sampling Point: DP-1, UPL
Investigator(s): Shannon D. Hill,		Section, Township.	Range: Tax Map #44-/	
Landform (hillslope, terrace, etc.): H			=	
				Datum:
Soil Map Unit Name: Poindexter W			NWI classifi	
Are climatic / hydrologic conditions on			o (If no, explain in I	
Are Vegetation, Soil,				present? Yes X No
Are Vegetation, Soil, c			f needed, explain any answ	
, con, con,	natural	y problematio: (i	Theodod, explain any answ	ord in recinarios.
SUMMARY OF FINDINGS -	Attach site map show	ing sampling poin	t locations, transect	s, important features, etc.
Hydrophytic Vegetation Present?	Yes No_X	1- 4 0	I. J. A	
Hydric Soil Present?	Yes No_X	Is the Samp within a We	ied Area tland? Yes	No <u>X</u>
Wetland Hydrology Present?	Yes No X			<u> </u>
Remarks:				
Data point was taken adjace	ent to flag A-70.			
HADBOLOGA				
HYDROLOGY Westernel Mydrology Indicators:			Cacandani India	notore (minimum of two required)
Wetland Hydrology Indicators:	Communication of the Communication	1. 3		cators (minimum of two required)
Primary Indicators (minimum of one			Surface Soi	
Surface Water (A1)		tic Plants (B14)		egetated Concave Surface (B8)
High Water Table (A2)	· · · · ·	Sulfide Odor (C1)		atterns (B10)
Saturation (A3)		Rhizospheres on Living R		, ,
Water Marks (B1)		of Reduced Iron (C4)		Water Table (C2)
Sediment Deposits (B2) Drift Deposits (B3)		n Reduction in Tilled Soil Surface (C7)		/isible on Aerial Imagery (C9)
Algal Mat or Crust (B4)		plain in Remarks)		Stressed Plants (D1)
Iron Deposits (B5)	Outlot (EX	nam m remarko)		c Position (D2)
Inundation Visible on Aerial Ima	agery (B7)		Shallow Aqu	
Water-Stained Leaves (B9)	9-17 (=17)			raphic Relief (D4)
Aquatic Fauna (B13)			FAC-Neutra	
Field Observations:				· · · · · · · · · · · · · · · · · · ·
	No X Depth (inc	ches):		
	No X Depth (inc	· ·		
	No X Depth (inc	-	Wetland Hydrology Prese	ent? Yes No X
(includes capillary fringe)				res ne
Describe Recorded Data (stream ga	uge, monitoring well, aerial p	photos, previous inspecti	ons), if available:	
Remarks:				

/EGETATION (Five Strata) – Use scientific na	mes of	plants.		Sampling Point: DP-1, UPL
201-201	Absolute	Dominant		Dominance Test worksheet:
Tree Stratum (Plot size: 20'x20')		Species?		Number of Dominant Species
1. Liriodendron tulipfera	35%	YES	FACU	That Are OBL, FACW, or FAC: 1 (A)
2. Pinus taeda	35%	YES	FAC	Total Number of Dominant
3				Species Across All Strata: 3 (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 33% (A/B)
6				
	70%	= Total Cove	er	Prevalence Index worksheet:
50% of total cover: 35%	20% of	total cover:	14%	Total % Cover of: Multiply by:
Sapling Stratum (Plot size: 20'x20'		•		OBL species $0 \times 1 = 0$
1. Juniperus virginiana	30%	YES	FACU	FACW species 0 x 2 = 0
2				FAC species 35 x 3 = 105
3				FACU species 65 x 4 = 260
4				UPL species $0 \times 5 = 0$
				Column Totals:100 (A)365 (B)
5	-			Prevalence Index = B/A = 3.65
0	30%	= Total Cove		
4 = 0.7				Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation
50% of total cover: 15%	20% of	total cover:	0%	
Shrub Stratum (Plot size: 20'x20')				2 - Dominance Test is >50%
1				3 - Prevalence Index is ≤3.0 ¹
2	-			4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
3	-			Problematic Hydrophytic Vegetation ¹ (Explain)
4				Trosionate tryanophytic vogetation (Explain)
5				¹ Indicators of hydric soil and wetland hydrology must
6				be present, unless disturbed or problematic.
		= Total Cove	er	Definitions of Five Vegetation Strata:
50% of total cover:	20% of	total cover:		
Herb Stratum (Plot size: 20'x20')				Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in.
1				(7.6 cm) or larger in diameter at breast height (DBH).
2				Sapling – Woody plants, excluding woody vines,
3				approximately 20 ft (6 m) or more in height and less
4				than 3 in. (7.6 cm) DBH.
_				Shrub – Woody plants, excluding woody vines,
5				approximately 3 to 20 ft (1 to 6 m) in height.
				Hank All hank account (see your sky) plants in all dings
7				Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody
8				plants, except woody vines, less than approximately 3
9				ft (1 m) in height.
10				Woody vine – All woody vines, regardless of height.
11				
		= Total Cove	er	
50% of total cover:	20% of	total cover:		
Woody Vine Stratum (Plot size: 20'x20')				
1				
2				
3				
4				
5				Hydrophytic
		= Total Cove		Hydrophytic Vegetation
50% of total cover:	20% of	total cover		Present? Yes NoX
		ioiai covei.		
Remarks: (Include photo numbers here or on a separate s	neet.)			

Sampling Point: DP-1, UPL

Profile Desc	ription: (Describe	to the dept	h needed to docun	ent the i	ndicator o	or confirm	n the absence of indicators.)
Depth	Matrix		Redox	. Features	3		
(inches)	Color (moist)	%	Color (moist)	<u>%</u>	Type ¹	Loc ²	<u>Texture</u> <u>Remarks</u>
0-4	10YR 4/3	100					Sandy Loam_
4-12	10YR 5/4	100					Sandy Loam
12-18	10YR 6/4	100					Light Sandy CL
		<u> </u>					
	-						
		- ——					
		<u> </u>					
		letion, RM=	Reduced Matrix, MS	=Masked	Sand Gra	ins.	² Location: PL=Pore Lining, M=Matrix.
Hydric Soil I	ndicators:						Indicators for Problematic Hydric Soils ³ :
Histosol			Dark Surface				2 cm Muck (A10) (MLRA 147)
	ipedon (A2)		Polyvalue Be				
Black His			Thin Dark Su			47, 148)	(MLRA 147, 148)
	n Sulfide (A4)		Loamy Gleye		-2)		Piedmont Floodplain Soils (F19)
	Layers (A5) ck (A10) (LRR N)		Depleted Mat Redox Dark S		6)		(MLRA 136, 147) Very Shallow Dark Surface (TF12)
	Below Dark Surfac	e (A11)	Depleted Dar				Other (Explain in Remarks)
	rk Surface (A12)	()	Redox Depre				<u> </u>
	ucky Mineral (S1) (I	LRR N,	Iron-Mangane			_RR N,	
	147, 148)		MLRA 136		. , ,		
Sandy G	leyed Matrix (S4)		Umbric Surfa	ce (F13) (MLRA 13	6, 122)	³ Indicators of hydrophytic vegetation and
	edox (S5)		Piedmont Flo				
	Matrix (S6)		Red Parent M	laterial (F	21) (MLR	4 127, 147	7) unless disturbed or problematic.
Restrictive L	.ayer (if observed):	:					
Type:							
Depth (inc	hes):						Hydric Soil Present? Yes No X
Remarks:							•

Project/Site: Cumberland	County Propert	ty City/C	county: Cumberlar	nd County	Sampling Date: 3/29/2018
Applicant/Owner: CWV, LLC; of		<u>- ,</u> - ,			Sampling Point: DP-2
Investigator(s): Shannon D		odwin Sectio	on Township Range:		
• , ,					Slope (%): 1-3%
					Datum:
Soil Map Unit Name: Poinde	exter Wedowee Co	mplex	Long		
Are climatic / hydrologic condit					
				_ (If no, explain in F	present? Yes X No
Are Vegetation, Soil					
Are Vegetation, Soil	, or Hydrology _	naturally problema	atic? (If needed	, explain any answe	ers in Remarks.)
SUMMARY OF FINDIN	GS – Attach site	e map showing san	npling point locat	ions, transects	s, important features, etc.
Hydrophytic Vegetation Pres	ent? Yes _>	≺ No	Is the Sampled Area	•	
Hydric Soil Present?	Yes>		within a Wetland?	Yes X	No
Wetland Hydrology Present?	Yes _>	< No			
Remarks:					_
Data a sint tal	+ t- fl A 405				· ·
Data point was taken	next to flag A-195).			
HYDROLOGY					
Wetland Hydrology Indicate	ors:			Secondary Indic	ators (minimum of two required)
Primary Indicators (minimum		hack all that annly)		Surface Soil	
			D4.4\	· ' '	getated Concave Surface (B8)
Surface Water (A1) X High Water Table (A2)		True Aquatic Plants (Sparsely ve Drainage Pa	-
-		Hydrogen Sulfide OdOxidized Rhizosphere		-	
Saturation (A3)		Oxidized Rhizospheri	-		Water Table (C2)
Water Marks (B1)Sediment Deposits (B2)		Recent Iron Reductio		Crayfish Bur	
Sediment Deposits (B2) Drift Deposits (B3)		Thin Muck Surface (0		•	/isible on Aerial Imagery (C9)
Algal Mat or Crust (B4)		Other (Explain in Rer			Stressed Plants (D1)
Iron Deposits (B5)		Other (Explain in Nei	ilaiks)	X Geomorphic	
Inundation Visible on Ae	rial Imagery (B7)			Shallow Aqu	
X Water-Stained Leaves (E	• • • •				aphic Relief (D4)
Aquatic Fauna (B13)) 9)			FAC-Neutra	
				I AC-Neulla	1 1631 (D3)
Field Observations:	Van Na	X Depth (inches):			
Surface Water Present?					
Water Table Present?		Depth (inches): 4"			
Saturation Present? (includes capillary fringe)	Yes No	X Depth (inches):	Wetland	Hydrology Prese	nt? Yes X No
Describe Recorded Data (str	eam gauge, monitori	ng well, aerial photos, pre	evious inspections), if a	vailable:	
					· ·
Remarks:					
rtomano.					
					· ·
					· ·
					· ·

9	
Lilex opace 30% YES FAC 2 2 2 2 30% 30% YES FAC 3 30% 30% YES FAC 3 30% YES FAC 30% YES FAC 30% 30% YES FAC 30% YES FAC 30% YES FAC 30% YES 7 7 7 7 7 7 8 3 3 3 3 3 3 3 3 3	
2 Carpinus caroliniana 3 0% YES FAC 3	
Species Across All Strate: 4	(A)
\$ Species Across All Strata. 4 4 4 5 5 5 5 5 5 5	
Fercent of Dominant Species 100%	(B)
That Are OBL, FACW, or FAC: 100%	
Frevalence Index worksheet: Total % Cover of total cover of total cover of total cover. 12%	(A/B)
Total % Cover of: Multiply by:	
Sapling Stratum (Plot size: 20'X20' Shrub Stratum (Plot	
Sapling Stratum (Plot size: 20'x20' Sapling Stratum (Plot size: 20'x20' Sapling Stratum (Plot size: 20'x20' Shrub Stratum (Plot size: 20'x20' Shrub Stratum (Plot size: 20'x20' Sapling Stratum (Plot size: 20'x20	
1.	
2.	
3 4.	
4. Column Totals: (A) 5. Column Totals: (A) Prevalence Index = B/A = Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% of total cover: 2 - Dominance Test is >50% of total cover: 2 - Dominance Test is >50% of total cover: 3 - Prevalence Index is ≤3.0° 4 - Morphological Adaptations¹ (Provide supp data in Remarks or on a separate sheet) 4 - Problematic Hydrophytic Vegetation¹ (Explaidations¹ (Provide supp data in Remarks or on a separate sheet) 5 - Indicators of hydric soil and wetland hydrology in be present, unless disturbed or problematic. 5 - Total Cover 5 - Total Cover Berb Stratum (Plot size: 20'x20') 1 - Rapid Test for Hydrophytic Vegetation 1 - Morphological Adaptations¹ (Provide supp data in Remarks or on a separate sheet) - Problematic Hydrophytic Vegetation¹ (Explaidations¹ (Formalians) - Problematic Hydrophytic Vegetation 1 - Rapid Test for Hydrophytic Vegetation - Problematic Hydrophytic Vege	
5	
Prevalence Index = B/A = Hydrophytic Vegetation Indicators: 20 ft of total cover: 20% of total cover: 2 - Neprolated Index is \$3.0° 2 - Dominance Test is \$50% of total cover: 3 - Prevalence Index is \$3.0° 4 - Norphological Adaptations (Provide suppose data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation (Explain Stratum (Plot size: 20′x20′) Problematic Hydrophytic Vegetation (Explain Stratum (Plot size: 20′x20′) Problematic Hydrophytic Vegetation (Explain Stratum (Plot size: 20′x20′) Problematic Hydrophytic Vegetation (Provide suppose data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation (Explain Stratum (Plot size: 20′x20′) Problematic Hydrophytic Vegetation (Provide suppose data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation (Provide suppose data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation (Provide suppose data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation (Provide suppose data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation (Provide suppose data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation (Provide suppose data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation (Provide suppose data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation Stratum (Plot Size) Problematic Hydrophytic	(B)
### Stratum (Plot size:	
Shrub Stratum (Plot size: 20'x20') 1.	-
Shrub Stratum (Plot size: 20'x20') 1.	
1	
2 4 - Morphological Adaptations¹ (Provide supplata in Remarks or on a separate sheet)	
data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation¹ (Explai Indicators of hydric soil and wetland hydrology in be present, unless disturbed or problematic. Definitions of Five Vegetation Strata: Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 (7.6 cm) or larger in diameter at breast height (DI strate) Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and lethan 3 in. (7.6 cm) DBH. Shrub – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and lethan 3 in. (7.6 cm) DBH. Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. Herb – All herbaceous (non-woody) plants, includent herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 10 in height. Herb – All herbaceous (non-woody) vines, less than approximately 10 in height. Woody vine – All woody vines, regardless of heims of total cover: 50% of total cover: 20% of total cover: 20% of total cover:	
A	orting
4)
6	,
be present, unless disturbed or problematic. Definitions of Five Vegetation Strata: Tree — Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 (7.6 cm) or larger in diameter at breast height (DI sapproximately 20 ft (6 m) or more in height and lethan 3 in. (7.6 cm) DBH. Shrub — Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and lethan 3 in. (7.6 cm) DBH. Shrub — Woody plants, excluding woody vines, approximately 20 ft (1 to 6 m) in height. Herb — All herbaceous (non-woody) plants, inclur herbaceous vines, regardless of size, and woody plants, except woody vines, regardless of height. Woody vine — All woody vines, regardless of height. Woody vine — All woody vines, regardless of height.	ıet
Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 (7.6 cm) or larger in diameter at breast height (DI Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 (7.6 cm) or larger in diameter at breast height (DI Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and let than 3 in. (7.6 cm) DBH. Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. Herb – All herbaceous (non-woody) plants, inclumentaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 10. — — — — — — — — — — — — — — — — — — —	201
Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 (7.6 cm) or larger in diameter at breast height (DI Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 18 (7.6 cm) or larger in diameter at breast height (DI Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and lethan 3 in. (7.6 cm) DBH. Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. Herb – All herbaceous (non-woody) plants, inclusherbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 10 in height. — = Total Cover 50% of total cover:	
Herb Stratum (Plot size:	
1	n.
2	
3	
than 3 in. (7.6 cm) DBH. Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. Herb – All herbaceous (non-woody) plants, inclue herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximate ft (1 m) in height. Woody vine – All woody vines, regardless of heims to consider the constant of t	SS
6	
6	
7	
8. herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximate ft (1 m) in height. 10. Woody vine – All woody vines, regardless of heim to the plants of the pl	na
9	''9
10	ly 3
11 = Total Cover 50% of total cover: 20% of total cover:	
= Total Cover 50% of total cover: 20% of total cover:	ht.
50% of total cover: 20% of total cover:	
W 1 M 0 (10 M 1 M 20 M 1 M 20 M 1 M 20 M 1 M 20 M 20	
Woody Vine Stratum (Plot size: 20'x20') 1 Vitis riparia 30% YES FACW	
3	
4	
5 Hydrophytic	
= Total Cover Vegetation	
50% of total cover: 20% 20% of total cover: 8% Present? Yes No	
Remarks: (Include photo numbers here or on a separate sheet.)	

SOIL Sampling Point: DP-2

Profile Desc	cription: (Describe	to the dep	th needed to docur	ment the	indicator	or confirm	the absenc	e of indica	ators.)	
Depth	Matrix			x Feature	s					
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	<u> </u>	Remark	<u>s</u>
0-4	10YR 3/3	100					Sandy Lo	am		
4-18	10YR 6/2	85	7.5YR 5/8	15	С	PL	Sandy Loa	m		
								- !		
	-	· 		-						
								_		
								_		
				-						-
					· 	-				
					·			_		
	-							_		
¹ Type: C=C	oncentration, D=Dep	letion, RM	=Reduced Matrix, M	S=Masked	d Sand Gra	ains.			ining, M=Matri	
Hydric Soil	Indicators:						Indi	cators for	Problematic	Hydric Soils³:
Histosol	l (A1)		Dark Surface	. ,				2 cm Muck	(A10) (MLRA	A 147)
	pipedon (A2)		Polyvalue Be				148)	Coast Prai	rie Redox (A1	6)
	istic (A3)		Thin Dark Su			47, 148)			147, 148)	
	en Sulfide (A4)		Loamy Gleye		(F2)		_		Floodplain Soi	ls (F19)
	d Layers (A5)		X Depleted Ma		- 0\				136, 147)	(TE40)
	uck (A10) (LRR N) d Below Dark Surfac	o (A11)	Redox Dark Depleted Da						ow Dark Surfa Ilain in Remar	
	ark Surface (A12)	e (ATT)	Redox Depre				_	Other (Exp	nain in Neman	NS)
	Mucky Mineral (S1) (L	RR N.	Iron-Mangan			LRR N.				
	A 147, 148)	,	MLRA 13		()(,				
	Gleyed Matrix (S4)		Umbric Surfa	-	(MLRA 13	6, 122)	³ ln	dicators of	hydrophytic v	egetation and
Sandy F	Redox (S5)		Piedmont Flo	oodplain S	Soils (F19)	(MLRA 14	18) w	etland hyd	rology must b	e present,
	d Matrix (S6)		Red Parent N	Material (F	21) (MLR	A 127, 147	7) u	nless distu	rbed or proble	ematic.
Restrictive	Layer (if observed):									
Type:			<u></u>							
Depth (in	iches):						Hydric So	il Present	? Yes <u>×</u>	No
Remarks:										

Project/Site: Cumberland C	ounty Property	City/C	County: Cumberla	nd County	Sampling Date: 3/29/2018
Applicant/Owner: CWV, LLC; c/			,		Sampling Point: DP-2, UPL
Investigator(s): Shannon D. H		n Section	on Township Range:		
<u> </u>					Slope (%): 1-3%
Subregion (LRR or MLRA): n/a			Long:		
Soil Map Unit Name: Poindexte			Long		cation: UPL
			/ X N-		
Are climatic / hydrologic condition				_ (If no, explain in F	
Are Vegetation, Soil					present? Yes X No No
Are Vegetation, Soil	, or Hydrology	naturally problema	atic? (if needed	d, explain any answe	ers in Remarks.)
SUMMARY OF FINDINGS	3 – Attach site ma	ap showing san	npling point locat	tions, transects	s, important features, etc.
Hydrophytic Vegetation Present	? Yes	No_X	la tha Camania d Anad	_	
Hydric Soil Present?	Yes		Is the Sampled Area within a Wetland?		NoX
Wetland Hydrology Present?	Yes				
Remarks:					
rtomano.					
Data point was taken ad	acent to flag A-195	5.			
HYDROLOGY					
Wetland Hydrology Indicators				Secondary Indic	ators (minimum of two required)
Primary Indicators (minimum of	one is required; check	all that apply)		Surface Soil	Cracks (B6)
Surface Water (A1)	T	True Aquatic Plants ((B14)	Sparsely Ve	egetated Concave Surface (B8)
High Water Table (A2)	H	Hydrogen Sulfide Od	or (C1)	Drainage Pa	atterns (B10)
Saturation (A3)	(Oxidized Rhizospher	es on Living Roots (C3	B) Moss Trim L	ines (B16)
Water Marks (B1)	F	Presence of Reduced	d Iron (C4)	Dry-Season	Water Table (C2)
Sediment Deposits (B2)	F	Recent Iron Reduction	on in Tilled Soils (C6)	Crayfish Bu	rrows (C8)
Drift Deposits (B3)	<u> </u>	Thin Muck Surface (0	C7)	Saturation V	/isible on Aerial Imagery (C9)
Algal Mat or Crust (B4)	(Other (Explain in Rer	marks)	Stunted or S	Stressed Plants (D1)
Iron Deposits (B5)				Geomorphic	Position (D2)
Inundation Visible on Aerial	Imagery (B7)			Shallow Aqu	uitard (D3)
Water-Stained Leaves (B9)				Microtopogr	aphic Relief (D4)
Aquatic Fauna (B13)				FAC-Neutra	l Test (D5)
Field Observations:					
Surface Water Present?	Yes No X	Depth (inches):			
Water Table Present?	Yes No <u>X</u>	Depth (inches):			
Saturation Present?	Yes No _X_	Depth (inches):	Wetland	d Hydrology Prese	nt? Yes No _X_
(includes capillary fringe)					
Describe Recorded Data (stream	n gauge, monitoring we	eii, aeriai priotos, pre	evious inspections), if a	ivaliable:	
Remarks:					· ·
					· ·
					· ·
					· ·

/EGETATION (Five Strata) – Use scientific na	imes of	plants.		Sampling Point: DP-2, UPL
201/201	Absolute	Dominant		Dominance Test worksheet:
Tree Stratum (Plot size: 20'x20')		Species?		Number of Dominant Species
1. Liriodendron tulipfera	30%	YES	FACU	That Are OBL, FACW, or FAC: 1 (A)
2. Pinus taeda	30%	YES	FAC	Total Number of Dominant
3				Species Across All Strata: 4 (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 25% (A/B)
6				
	60%	= Total Cove	er	Prevalence Index worksheet:
50% of total cover: 30%	20% of	total cover:	12%	Total % Cover of: Multiply by:
Sapling Stratum (Plot size: 20'x20')		loid: 00.0		OBL species $0 \times 1 = 0$
1. Juniperus virginiana	15%	VES	FACU	FACW species $0 \times 2 = 0$
2. Fagus grandifolia		YES	FACU	FAC species 30 x 3 = 90
				FACU species x 4 = 280
3				UPL species0 x 5 =0
4				Column Totals: (A) (B)
5				3.70
6	400/			Prevalence Index = B/A = 3.70
		= Total Cove		Hydrophytic Vegetation Indicators:
50% of total cover: 20%	20% of	total cover:	8%	1 - Rapid Test for Hydrophytic Vegetation
Shrub Stratum (Plot size: 20'x20')				2 - Dominance Test is >50%
1				3 - Prevalence Index is ≤3.0 ¹
2				4 - Morphological Adaptations ¹ (Provide supporting
3				data in Remarks or on a separate sheet)
4				Problematic Hydrophytic Vegetation ¹ (Explain)
5 6				¹ Indicators of hydric soil and wetland hydrology must
0		T-tal Cov		be present, unless disturbed or problematic.
		= Total Cove	31	Definitions of Five Vegetation Strata:
50% of total cover:	20% of	total cover:		Tree – Woody plants, excluding woody vines,
Herb Stratum (Plot size: 20'x20')				approximately 20 ft (6 m) or more in height and 3 in.
1				(7.6 cm) or larger in diameter at breast height (DBH).
2				Sapling – Woody plants, excluding woody vines,
3				approximately 20 ft (6 m) or more in height and less
4				than 3 in. (7.6 cm) DBH.
5				Shrub – Woody plants, excluding woody vines,
6				approximately 3 to 20 ft (1 to 6 m) in height.
7				Herb – All herbaceous (non-woody) plants, including
8				herbaceous vines, regardless of size, and woody
				plants, except woody vines, less than approximately 3
9				ft (1 m) in height.
10				Woody vine – All woody vines, regardless of height.
11				
		= Total Cove	ər	
50% of total cover:	20% of	total cover:		
Woody Vine Stratum (Plot size: 20'x20')				
1				
2				
3				
4				
5				
J				Hydrophytic
		= Total Cove		Vegetation
50% of total cover:	20% of	total cover:		1103cm: 103 110
Remarks: (Include photo numbers here or on a separate sl	heet.)			

Sampling Point: DP-2, UPL

	Matrix Color (moist)	%	Redox F		Loc ²	Texture		Remark	
(inches) 0-4	10YR 4/3	100	Color (moist)	% Type'	LUC			Remark	.5
						Sandy Lo			
4-18	10YR 5/4	100				Sandy Loa	<u> </u>		
						-			
		<u> </u>					<u> </u>		
						•			
							<u> </u>		
			<u> </u>						
							<u> </u>		
						21			
ype: C=Co vdric Soil II		oletion, RM=	Reduced Matrix, MS=N	lasked Sand Gra	ins.		PL=Pore Lin		^{lx.} Hydric Soils³:
			Dark Surface (S	7)					-
Histosol (ipedon (A2)		Dark Surface (S	<i>r)</i> / Surface (S8) (M	Ι Ρ Δ 147	148)	2 cm Muck (Coast Prairie		
Black His				ce (S9) (MLRA 1 4		140)	(MLRA 14		0)
	n Sulfide (A4)		Loamy Gleyed N		,,		Piedmont Fl		ils (F19)
	Layers (A5)		Depleted Matrix				(MLRA 13		,
_ 2 cm Mu	ck (A10) (LRR N)		Redox Dark Sur				Very Shallov	v Dark Surfa	ace (TF12)
	Below Dark Surfac	e (A11)	Depleted Dark S	, ,			Other (Expla	in in Remar	ks)
	rk Surface (A12)		Redox Depressi						
	ucky Mineral (S1) (LRR N,		Masses (F12) (L	.RR N,				
	147, 148)		MLRA 136)	/E42) /MI DA 42 /	. 400\	3	Indiantara of b	v drophytic v	reactetion and
	leyed Matrix (S4) edox (S5)			(F13) (MLRA 136 olain Soils (F19) (wetland hydro		regetation and
-	Matrix (S6)			erial (F21) (MLR			unless disturb		
	ayer (if observed)	<u> </u>	rear arene man	onar (1 2 1) (III 2 17)	(127, 147	<u>,</u>	dilicoo diotare	Tod of proble	omatio.
Type:	,								
I VUC.						Hydric S	Soil Present?	Yes	No ×
	hes):					11,4			
Depth (inc	hes):								
Depth (inc	hes):								
Depth (inc	hes):								
Depth (inc	hes):								
Depth (inc	hes):								
Depth (inc	hes):								
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••	hes):								
Depth (inc	hes):								
Depth (inc	hes):								
Depth (inc	hes):								

Project/Site: Cumberland	County Property	Citv/C	ounty: Cumberlar	nd County	Sampling Date: 3/29/2018
Applicant/Owner: CWV, LLC; of	:/o James H. Martin				Sampling Point: DP-3
Investigator(s): Shannon D		in Section	on Townshin Range:		
					Slope (%): 2-4%
					Datum:
Soil Map Unit Name: Poinde			Long		
Are climatic / hydrologic condit			es No	(If no, explain in F	
Are Vegetation, Soil					present? Yes X No No
Are Vegetation, Soil	, or Hydrology	naturally problema	atic? (If needed,	, explain any answe	ers in Remarks.)
SUMMARY OF FINDIN	GS – Attach site m	ap showing sam	pling point locat	ions, transects	s, important features, etc.
Hydrophytic Vegetation Pres	ent? Yes X	No	Is the Sampled Area		
Hydric Soil Present?	Yes X	No No	within a Wetland?	$_{Yes}$ $ imes$	No
Wetland Hydrology Present?	Yes X	No			
Remarks:					
Data point was taken	next to flag A-260.				
HYDROLOGY					
Wetland Hydrology Indicat	ors:			Secondary Indic	ators (minimum of two required)
Primary Indicators (minimum	of one is required; check	all that apply)		Surface Soil	Cracks (B6)
Surface Water (A1)		True Aquatic Plants (B14)	Sparsely Ve	getated Concave Surface (B8)
X High Water Table (A2)		Hydrogen Sulfide Odd	or (C1)	X Drainage Pa	atterns (B10)
Saturation (A3)			es on Living Roots (C3)		
Water Marks (B1)		Presence of Reduced	= : : :		Water Table (C2)
Sediment Deposits (B2)		Recent Iron Reductio		X Crayfish Bu	
Drift Deposits (B3)		Thin Muck Surface (C	27)	Saturation V	isible on Aerial Imagery (C9)
Algal Mat or Crust (B4)		Other (Explain in Ren			Stressed Plants (D1)
Iron Deposits (B5)				X Geomorphic	Position (D2)
Inundation Visible on Ae	rial Imagery (B7)			Shallow Aqu	
X Water-Stained Leaves (F					aphic Relief (D4)
X Aquatic Fauna (B13)	,			FAC-Neutra	
Field Observations:					
Surface Water Present?	Yes NoX_	Depth (inches):			
Water Table Present?	Yes X No				
Saturation Present?	Yes No			Hydrology Proce	nt? Yes <u> </u>
(includes capillary fringe)	res No	Deptil (inches).	welland	nyurology Frese	int! Tes NO
Describe Recorded Data (str	eam gauge, monitoring w	ell, aerial photos, pre	vious inspections), if av	vailable:	
Remarks:					
B13: Beaver pond wa	as present in the ar	ea.			

/EGETATION (Five Strata) – Use scientific na	mes of	plants.		Sampling Point: DP-3
201.001	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 20'x20')		Species?	Status	Number of Dominant Species
1. Acer rubrum	30%	YES	FAC	That Are OBL, FACW, or FAC: 3 (A)
2. Fagus grandifolia	20%	YES	FACU	Total Number of Dominant
3				Species Across All Strata: 4 (B)
4				December of Dominant Chapita
5				Percent of Dominant Species That Are OBL, FACW, or FAC: 75% (A/B)
6				, , ,
	50%	= Total Cov	er	Prevalence Index worksheet:
50% of total cover: 25%				Total % Cover of: Multiply by:
Sapling Stratum (Plot size: 20'x20')	20 /6 01	iolai covei.		OBL species x 1 =
Saping Stratum (Plot size:) 1. Carpinus caroliniana	25%	YES	FAC	FACW species x 2 =
·· ·····			170	FAC species x 3 =
2				FACU species x 4 =
3				UPL species x 5 =
4				Column Totals: (A) (B)
5				(, (,
6				Prevalence Index = B/A =
	25%	= Total Cov	er	Hydrophytic Vegetation Indicators:
50% of total cover: <u>12.5</u> °	% 20% of	total cover	5%	1 - Rapid Test for Hydrophytic Vegetation
Shrub Stratum (Plot size: 20'x20')	<u>70</u> 2076 01	total cover.	0 70	2 - Dominance Test is >50%
				3 - Prevalence Index is ≤3.0 ¹
1				4 - Morphological Adaptations ¹ (Provide supporting
2				data in Remarks or on a separate sheet)
3				Problematic Hydrophytic Vegetation ¹ (Explain)
4				
5				¹ Indicators of hydric soil and wetland hydrology must
6				be present, unless disturbed or problematic.
		= Total Cov	er	Definitions of Five Vegetation Strata:
50% of total cover:	20% of	total cover:		
Herb Stratum (Plot size: 20'x20')	2070 01	10101 00101.		Tree – Woody plants, excluding woody vines,
				approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).
1				(' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' '
2				Sapling – Woody plants, excluding woody vines,
3				approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.
4				
5				Shrub – Woody plants, excluding woody vines,
6				approximately 3 to 20 ft (1 to 6 m) in height.
7				Herb – All herbaceous (non-woody) plants, including
8				herbaceous vines, regardless of size, and woody
9				plants, except woody vines, less than approximately 3 ft (1 m) in height.
10				in (· · · · · · · · · · · · · · · · · ·
11				Woody vine – All woody vines, regardless of height.
· ·· <u> </u>		= Total Cov		
50% of total cover:	20% of	total cover:		
Woody Vine Stratum (Plot size: 20'x20')				
1. Smilax rotundifolia	25%	YES	FAC	
2				
3				
4				
5.				
	25%	= Total Cov	er	Hydrophytic Vegetation
12 5				Present? Yes X No
50% of total cover: 12.5		total cover:	<u> </u>	
Remarks: (Include photo numbers here or on a separate sl	heet.)			

SOIL Sampling Point: DP-3

Profile Desc	ription: (Describe	to the dep	th needed to docur	ment the i	indicator	or confirm	n the absence of indicators.)
Depth	Matrix		Redo	x Feature	s		
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture Remarks
0-4	10YR 3/2	100					Sandy Loam
4-18	10YR 7/1	90	7.5YR 6/6	_10	С	PL	Sandy Loam
					-		
	·						
¹ Type: C=Co		oletion, RM	=Reduced Matrix, M	S=Masked	d Sand Gr	ains.	² Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils ³ :
-			Davis Confess	(07)			-
Histosol			Dark Surface Polyvalue Be		oo (S9) (N	II D A 147	2 cm Muck (A10) (MLRA 147) , 148) Coast Prairie Redox (A16)
Black Hi	pipedon (A2)		Polyvalue Be		. , .		(MLRA 147, 148)
	n Sulfide (A4)		Loamy Gleye	, ,		47, 140)	Piedmont Floodplain Soils (F19)
	Layers (A5)		X Depleted Ma		(1 2)		(MLRA 136, 147)
	ick (A10) (LRR N)		Redox Dark	. ,	- 6)		Very Shallow Dark Surface (TF12)
	Below Dark Surfac	e (A11)	Depleted Da	,	,		Other (Explain in Remarks)
	ark Surface (A12)	, ,	Redox Depre				
Sandy M	lucky Mineral (S1) (I	LRR N,	Iron-Mangan	ese Mass	es (F12) (LRR N,	
	A 147, 148)		MLRA 13	•			
	lleyed Matrix (S4)		Umbric Surfa				³ Indicators of hydrophytic vegetation and
	edox (S5)		Piedmont Flo				
	Matrix (S6)		Red Parent N	Material (F	21) (MLR	A 127, 147	7) unless disturbed or problematic.
	_ayer (if observed)	:					
Type:							
Depth (inc	ches):						Hydric Soil Present? Yes X No No
Remarks:							

Project/Site: Cumberland Cou	inty Property	City/County:	Cumberland	d County	Sampling Date: 3/29/2018
Applicant/Owner: CWV, LLC; c/o J					Sampling Point: DP-3, UPL
Investigator(s): Shannon D. Hill,		Section, Towns	ship. Range:		
Landform (hillslope, terrace, etc.): <u>I</u>					
Subregion (LRR or MLRA): n/a				78.138765453	
Soil Map Unit Name: Poindexter V	Nedowee Complex			NWI classific	
Are climatic / hydrologic conditions o		ne of year? Yes X	No	(If no, explain in R	
Are Vegetation, Soil,					present? Yes X No
Are Vegetation, Soil,				explain any answe	
, John	or rryarologyriata	rany problematio:	(II TIOCGCG,	explain any anowe	io in Nemarko.)
SUMMARY OF FINDINGS -	· Attach site map she	owing sampling p	oint location	ons, transects	, important features, etc.
Hydrophytic Vegetation Present?	Yes No_>	X			
Hydric Soil Present?	Yes No_>	.00	ampled Area Wetland?	Yes	No <u>X</u>
Wetland Hydrology Present?	Yes No _>				<u> </u>
Remarks:					
Data point was taken adjac	ent to flag A-260.				
HYDROLOGY					
Wetland Hydrology Indicators:				Secondary Indica	ators (minimum of two required)
Primary Indicators (minimum of one	o is required; check all that	apply)		Surface Soil	
	•				
Surface Water (A1) High Water Table (A2)		quatic Plants (B14) en Sulfide Odor (C1)		Sparsely veg	getated Concave Surface (B8)
Saturation (A3)	· · · · ·	d Rhizospheres on Livi	na Roots (C3)	Moss Trim Li	
Water Marks (B1)		ce of Reduced Iron (C4			Water Table (C2)
Sediment Deposits (B2)		Iron Reduction in Tilled		Crayfish Buri	
Drift Deposits (B3)		ıck Surface (C7)	(00)		sible on Aerial Imagery (C9)
Algal Mat or Crust (B4)		Explain in Remarks)			tressed Plants (D1)
Iron Deposits (B5)		,			Position (D2)
Inundation Visible on Aerial Im	agery (B7)			Shallow Aqui	
Water-Stained Leaves (B9)				Microtopogra	aphic Relief (D4)
Aquatic Fauna (B13)				FAC-Neutral	Test (D5)
Field Observations:					
Surface Water Present? Yes	s No X Depth ((inches):			
Water Table Present? Yes	s No _X_ Depth ((inches):			
Saturation Present? Yes	s No X Depth ((inches):	Wetland I	Hydrology Presen	nt? Yes No <u>×</u>
(includes capillary fringe)					
Describe Recorded Data (stream g	auge, monitoring well, aeria	al photos, previous insp	pections), if ava	ailable:	
Remarks:					

/EGETATION (Five Strata) – Use scientific na	ames of	plants.		Sampling Point: DP-3, UPL
001-001	Absolute	Dominant		Dominance Test worksheet:
Tree Stratum (Plot size: 20'x20')		Species?		Number of Dominant Species
1. Liriodendron tulipfera	25%	YES	FACU	That Are OBL, FACW, or FAC: 1 (A)
2. Pinus taeda	25%	YES	FAC	Total Number of Dominant
3				Species Across All Strata: 4 (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 25% (A/B)
6				
	50%	= Total Cove	er	Prevalence Index worksheet:
50% of total cover: 25%	20% of	total cover:	10%	Total % Cover of: Multiply by:
Sapling Stratum (Plot size: 20'x20')		1010. 02. 2		OBL species $0 \times 1 = 0$
1. Fagus grandifolia	30%	YES	FACU	FACW species $0 \times 2 = 0$
Juniperus virginiana				FAC species 25 x 3 = 75
				FACU species x 4 = 300
3				UPL species x 5 = 0
4				Column Totals: 100 (A) 375 (B)
5				3.75
6	50%			Prevalence Index = B/A = 3.75
		= Total Cove		Hydrophytic Vegetation Indicators:
50% of total cover: 25%	20% of	total cover:	10%	1 - Rapid Test for Hydrophytic Vegetation
Shrub Stratum (Plot size: 20'x20'				2 - Dominance Test is >50%
1				3 - Prevalence Index is ≤3.0 ¹
2				4 - Morphological Adaptations ¹ (Provide supporting
3				data in Remarks or on a separate sheet)
4				Problematic Hydrophytic Vegetation ¹ (Explain)
5				
6				¹ Indicators of hydric soil and wetland hydrology must
0		= Total Cove	or	be present, unless disturbed or problematic.
				Definitions of Five Vegetation Strata:
50% of total cover: <u>Herb Stratum</u> (Plot size:)	20% of	total cover:		Tree – Woody plants, excluding woody vines,
Herb Stratum (Plot size: _ZU XZU) 1				approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).
				Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less
3				than 3 in. (7.6 cm) DBH.
4				
5				Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.
6				approximately 3 to 20 it (1 to 0 iii) iii height.
7				Herb – All herbaceous (non-woody) plants, including
8				herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3
9				ft (1 m) in height.
10				All viscalis in a goodless of beight
11				Woody vine – All woody vines, regardless of height.
		= Total Cove		
50% of total cover:	20% of	total cover		
Woody Vine Stratum (Plot size: 20'x20')	20 /0 0.	101ai 00vo		
1				
2				
3				
4				
5				Hydrophytic
		= Total Cove	er	Vegetation
50% of total cover:	20% of	total cover:		Present? Yes No_X
Remarks: (Include photo numbers here or on a separate s				
remarks. (include photo numbers here of on a separate s	neet.)			

Sampling Point: DP-3, UPL

	Matrix	%	Redox Features	Type ¹ Loc ²	Texture		Domorko	
(inches) 0-4	Color (moist)	100	Color (moist) %	Type Loc			Remarks	i
	10YR 4/3				Sandy Lo	<u>a</u> m		
4-12	10YR 5/6	100			Sandy Loa	<u>m</u>		
12-18	10YR 6/6	100			Sandy Loar	<u> </u>		
						_		
						_		
	-							
	-							
ype: C=Cc	oncentration, D=Dep	oletion, RM=	Reduced Matrix, MS=Masked S	Sand Grains.	² Location:	PL=Pore Lini	ng, M=Matrix	⟨.
	ndicators:	•	,			icators for P		
Histosol	(A1)		Dark Surface (S7)			2 cm Muck (A10) (MLRA	147)
	pipedon (A2)		Polyvalue Below Surface		148)	Coast Prairie	Redox (A16	5)
_ Black His			Thin Dark Surface (S9) ((MLRA 14		
	n Sulfide (A4)		Loamy Gleyed Matrix (F2)	2)		Piedmont Flo		s (F19)
	l Layers (A5) ick (A10) (LRR N)		Depleted Matrix (F3) Redox Dark Surface (F6)	١		(MLRA 13 Very Shallov		o (TF12)
	d Below Dark Surfac	ce (A11)	Depleted Dark Surface (,		Other (Expla		. ,
	ark Surface (A12)	,	Redox Depressions (F8)			(<u></u>		-,
	lucky Mineral (S1) (LRR N,	Iron-Manganese Masses					
	\ 147, 148)		MLRA 136)					
	lleyed Matrix (S4)		Umbric Surface (F13) (M			ndicators of h		-
-	edox (S5)		Piedmont Floodplain Soi			wetland hydro		
	Matrix (S6)	<u> </u>	Red Parent Material (F2	1) (MLRA 127, 147	7)	unless disturb	ed or problei	matic.
estrictive L	_ayer (if observed)	1-						
Turner								X
Type:	-h).				Liverinia C	-:I D10	V	
Depth (inc	ches):				Hydric S	oil Present?	Yes	No <u>×</u> _
Depth (inc	ches):		_		Hydric S	oil Present?	Yes	No <u>^_</u>
Depth (inc	ches):				Hydric S	oil Present?	Yes	No <u>^</u>
Depth (inc	ches):				Hydric S	oil Present?	Yes	No <u>^_</u>
Depth (inc	ches):				Hydric S	oil Present?	Yes	No <u>^_</u>
Depth (inc	ches):		<u> </u>		Hydric Se	oil Present?	Yes	No <u>^_</u>
Depth (inc	ches):				Hydric S	oil Present?	Yes	No <u>^_</u>
Depth (inc	ches):				Hydric S	oil Present?	Yes	No <u>^_</u>
Depth (inc	ches):				Hydric S	oil Present?	Yes	No <u>^_</u>
Depth (inc	ches):				Hydric S	oil Present?	Yes	No <u>^_</u>
Depth (inc	ches):				Hydric Se	oil Present?	Yes	No <u>^_</u>
Depth (inc	ches):				Hydric S	oil Present?	Yes	No <u>^_</u>
Depth (inc	ches):				Hydric S	oil Present?	Yes	No <u>^_</u>
Depth (inc	ches):				Hydric S	oil Present?	Yes	No <u>^_</u>
Depth (inc	ches):				Hydric S	oil Present?	Yes	No <u>^_</u>
Depth (inc	ches):				Hydric S	oil Present?	Yes	No <u>^_</u>
	ches):				Hydric S	oil Present?	Yes	No
Depth (inc	ches):				Hydric S	oil Present?	Yes	No_ <u>^</u>
Depth (inc	ches):				Hydric S	oil Present?	Yes	No <u>^</u>
Depth (inc	ches):				Hydric S	oil Present?	Yes	No_ <u>^</u>
Depth (inc	ches):				Hydric S	oil Present?	Yes	No
Depth (inc	ches):				Hydric S	oil Present?	Yes	

Project/Site: Cumberland	County Property	Citv/C	county: Cumberlan	nd County	Sampling Date: 4/2/2018
Applicant/Owner: CWV, LLC; of					Sampling Point: DP-4
Investigator(s): Hannah L.		dwin Section	on Townshin Range		
					Slope (%): 1-3%
Subregion (LRR or MLRA):n	/a 1/	37.554453962	Long: -78	8.133166947	
Soil Map Unit Name: Waterl		at		NWI classific	
		for this time of the O. N.			
Are climatic / hydrologic condit				(If no, explain in F	
Are Vegetation, Soil		-			present? Yes X No No
Are Vegetation, Soil	, or Hydrology	naturally problema	atic? (If needed,	, explain any answe	ers in Remarks.)
SUMMARY OF FINDIN	GS – Attach site	map showing san	pling point locati	ions, transects	s, important features, etc.
Hydrophytic Vegetation Pres	ent? Yes X	No	Is the Sampled Area		
Hydric Soil Present?	Yes X		within a Wetland?	$_{Yes}$ $ imes$	No
Wetland Hydrology Present?	Yes X				_
Remarks:					
					· ·
Data point was taken i	next to flag B-265.				
HYDROLOGY					
Wetland Hydrology Indicate	ors:			Secondary Indica	ators (minimum of two required)
Primary Indicators (minimum	of one is required; che	eck all that apply)		Surface Soil	Cracks (B6)
Surface Water (A1)	_	_ True Aquatic Plants (B14)	Sparsely Ve	egetated Concave Surface (B8)
X High Water Table (A2)	_	_ Hydrogen Sulfide Od	or (C1)	X Drainage Pa	atterns (B10)
Saturation (A3)		_ Oxidized Rhizospher) Moss Trim L	ines (B16)
Water Marks (B1)	_	_ Presence of Reduced	d Iron (C4)	Dry-Season	Water Table (C2)
Sediment Deposits (B2)	_	_ Recent Iron Reductio	n in Tilled Soils (C6)	X Crayfish Bur	rrows (C8)
Drift Deposits (B3)	_	_ Thin Muck Surface (C	27)	Saturation V	/isible on Aerial Imagery (C9)
Algal Mat or Crust (B4)	_	_ Other (Explain in Rer	narks)	Stunted or S	Stressed Plants (D1)
Iron Deposits (B5)				X Geomorphic	Position (D2)
Inundation Visible on Ae	rial Imagery (B7)			Shallow Aqu	ıitard (D3)
X Water-Stained Leaves (E	39)			Microtopogr	aphic Relief (D4)
Aquatic Fauna (B13)				FAC-Neutra	l Test (D5)
Field Observations:					
Surface Water Present?	Yes NoX	Depth (inches):			
Water Table Present?		Depth (inches): 6"			
Saturation Present?		Depth (inches):		Hydrology Prese	nt? Yes X No
(includes capillary fringe)				-	
Describe Recorded Data (str	eam gauge, monitoring	y well, aerial photos, pre	vious inspections), if av	/ailable:	
Remarks:					

/EGETATION (Five Strata) – Use scientific n	ames of _l	plants.		Sampling Point: DP-4
201-201	Absolute	Dominant		Dominance Test worksheet:
Tree Stratum (Plot size: 20'x20')		Species?		Number of Dominant Species
1. Betula nigra	25%	YES	FACW	That Are OBL, FACW, or FAC: 5 (A)
2. Liquidambar styraciflua	20%	YES	FAC	Total Number of Dominant
3. Acer rubrum	10%	YES	FAC	Species Across All Strata: 6 (B)
4				Demonst of Deminerat Conscion
5				Percent of Dominant Species That Are OBL, FACW, or FAC: 83% (A/B)
6				
	== 0/	= Total Cove	<u></u>	Prevalence Index worksheet:
50% of total cover:27.5				Total % Cover of: Multiply by:
	20% of	total cover:	1170	OBL species x 1 =
Sapling Stratum (Plot size: 20'x20')	050/	VEC	EAC	FACW species x 2 =
1. Carpinus caroliniana	25%	YES	FAC	FAC species x 3 =
2				FACU species x 4 =
3	. 			UPL species x 5 =
4	. <u></u>			Column Totals: (A) (B)
5				Column Totals: (A) (B)
6.				Prevalence Index = B/A =
o	25%	= Total Cove		Hydrophytic Vegetation Indicators:
40.5				' ' ' '
50% of total cover: <u>12.5</u>	20% of	total cover:	5%	1 - Rapid Test for Hydrophytic Vegetation
Shrub Stratum (Plot size: 20'x20')				✓ 2 - Dominance Test is >50%
1				3 - Prevalence Index is ≤3.0 ¹
2	. <u></u>			4 - Morphological Adaptations ¹ (Provide supporting
3				data in Remarks or on a separate sheet)
4				Problematic Hydrophytic Vegetation ¹ (Explain)
5				
6				¹ Indicators of hydric soil and wetland hydrology must
0		Total Cov		be present, unless disturbed or problematic.
		= Total Cove	er er	Definitions of Five Vegetation Strata:
50% of total cover:	20% of	total cover:		Tree – Woody plants, excluding woody vines,
Herb Stratum (Plot size: 20'x20')				approximately 20 ft (6 m) or more in height and 3 in.
1. Juncus effusus	5%	YES	FACW	(7.6 cm) or larger in diameter at breast height (DBH).
2				Sapling – Woody plants, excluding woody vines,
3				approximately 20 ft (6 m) or more in height and less
4.				than 3 in. (7.6 cm) DBH.
5				Shrub – Woody plants, excluding woody vines,
				approximately 3 to 20 ft (1 to 6 m) in height.
6				
7				Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody
8				plants, except woody vines, less than approximately 3
9				ft (1 m) in height.
10	· 			Woody vine – All woody vines, regardless of height.
11				All Woody Villes, regardless of height.
	5%	= Total Cove	er	
50% of total cover: 2.5%	% 20% of	total cover:	1%	
Woody Vine Stratum (Plot size: 20'x20')		10101 00101.		
1 Smilax rotundifolia	15%	YES	FAC	
''	· 		170	
2				
3	. ———			
4				
5				Hydrophytic
	15%	= Total Cove	er	Vegetation
50% of total cover:7.5				Present? Yes X No
		ioiai covei.		
Remarks: (Include photo numbers here or on a separate s	sneet.)			

SOIL Sampling Point: DP-4

Profile Desc	ription: (Describe	to the dep	th needed to docur	ment the i	ndicator	or confirm	n the absence of indicators.)
Depth	Matrix		Redo	x Feature	S		
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture Remarks
0-4	10YR 3/2	100					Sandy Loam
4-18	10YR 6/2	90	7.5YR 5/8	10	C	PL	Sandy Loam
	-						
¹ Type: C=Co	oncentration. D=Dec	letion. RM	=Reduced Matrix, M	S=Masked	Sand Gr	ains.	² Location: PL=Pore Lining, M=Matrix.
Hydric Soil			. toddood maan, m				Indicators for Problematic Hydric Soils ³ :
Histosol	(A1)		Dark Surface	e (S7)			2 cm Muck (A10) (MLRA 147)
	pipedon (A2)		Polyvalue Be		ce (S8) (N	ILRA 147,	
Black Hi	stic (A3)		Thin Dark Su	urface (S9)	(MLRA 1	47, 148)	(MLRA 147, 148)
	n Sulfide (A4)		Loamy Gleye		F2)		Piedmont Floodplain Soils (F19)
	d Layers (A5)		X Depleted Ma	. ,			(MLRA 136, 147)
	ick (A10) (LRR N)	(* ()	Redox Dark	,	,		Very Shallow Dark Surface (TF12)
	d Below Dark Surfac	e (A11)	Depleted Da				Other (Explain in Remarks)
	ark Surface (A12) lucky Mineral (S1) (I DD NI	Redox Depre Iron-Mangan			I DD N	
	147, 148)	LKK N,	MLRA 13		es (F12) (LKK N,	
	Gleyed Matrix (S4)		Umbric Surfa	-	MLRA 13	6. 122)	³ Indicators of hydrophytic vegetation and
	ledox (S5)		Piedmont Flo				
	Matrix (S6)		Red Parent N				
Restrictive I	_ayer (if observed)	:		<u> </u>			
Type:							
Depth (inc	ches):						Hydric Soil Present? Yes X No
Remarks:	, -		-				

Project/Site: Cumberland Co	unty Property	City/County:	Cumberland	County	Sampling Date: 4/2/2018
Applicant/Owner: CWV, LLC; c/o					Sampling Point: DP-4, UPL
Investigator(s): Hannah L. Mille		Section, Towns	ship, Range: T	ax Map #44-A-1	13
Landform (hillslope, terrace, etc.): _					
Subregion (LRR or MLRA): n/a					
Soil Map Unit Name: Wateree sa			_	NWI classificat	
Are climatic / hydrologic conditions		e of year? Yes X		If no, explain in Re	
Are Vegetation, Soil			Are "Normal		esent? Yes X No
Are Vegetation, Soil				explain any answers	
, con	, or rivarologynature	any problematio:	(II Ticcaca, c.	Apidin any anowers	in Remarks.)
SUMMARY OF FINDINGS	 Attach site map sho 	wing sampling p	oint locatio	ns, transects,	important features, etc.
Hydrophytic Vegetation Present?	Yes No_X	la tha C	lad Auss		
Hydric Soil Present?	Yes No_X		ampled Area Wetland?	Yes	No <u>X</u>
Wetland Hydrology Present?	Yes No X	(
Remarks:					
Data point was taken adja	cent to flag B-265.				
HYDROLOGY					
Wetland Hydrology Indicators:				Secondary Indicate	ors (minimum of two required)
Primary Indicators (minimum of or	ne is required; check all that :	annly)		Surface Soil C	
Surface Water (A1)	•				etated Concave Surface (B8)
High Water Table (A2)		uatic Plants (B14) n Sulfide Odor (C1)		Drainage Patte	
Saturation (A3)	· -	Rhizospheres on Livi	na Roots (C3)	Moss Trim Line	
Water Marks (B1)		e of Reduced Iron (C4			ater Table (C2)
Sediment Deposits (B2)		ron Reduction in Tilled		Crayfish Burro	
Drift Deposits (B3)		ck Surface (C7)	(,	-	ble on Aerial Imagery (C9)
Algal Mat or Crust (B4)		xplain in Remarks)			essed Plants (D1)
Iron Deposits (B5)				Geomorphic P	
Inundation Visible on Aerial Ir	nagery (B7)			Shallow Aquita	ard (D3)
Water-Stained Leaves (B9)				Microtopograp	hic Relief (D4)
Aquatic Fauna (B13)				FAC-Neutral T	est (D5)
Field Observations:					
Surface Water Present? Ye	es No $oxed{X}$ Depth (i	inches):			
Water Table Present? Ye	es No X Depth (i	inches):			
Saturation Present? Ye	es No X Depth (i	inches):	Wetland H	ydrology Present	? Yes No <u>X</u>
(includes capillary fringe) Describe Recorded Data (stream	gauge monitoring well acris	l photos provious inst	poctions) if avai	ilabla:	
Describe Necorded Data (Stream	gauge, monitoring well, aena	ii priotos, previous irisi	Dections), ii avai	liable.	
Demodes					
Remarks:					

Tree Stratum (Plot size: _20'x20') 1. Liriodendron tulipfera 2. Pinus taeda 3 4 5	25%	Dominant Species? YES YES		Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A) Total Number of Dominant
1. Liriodendron tulipfera 2. Pinus taeda 3	25%	YES YES	FACU	That Are OBL, FACW, or FAC: 2 (A)
2. Pinus taeda 34	20%	YES		
34			FAC	Total Number of Dominant
4				
				Species Across All Strata: (B)
5				Barrant of Barrian of Opening
				Percent of Dominant Species That Are OBL, FACW, or FAC: 40% (A/B)
6.	45%			(12)
	7570	= Total Cov	/er	Prevalence Index worksheet:
50% of total cover: _ 22	5% 20% of	total acuer	. 9%	Total % Cover of: Multiply by:
Sapling Stratum (Plot size: 20'x20')	20% 01	total cover.		OBL species $0 \times 1 = 0$
4 Indiana distributa	200/	VE0	EACH	FACW species <u>0</u> x 2 = <u>0</u>
1. Juniperus virginiana		YES	FACU	FAC species 30 x 3 = 90
2. Ilex opaca	10%	YES	FAC	FACU species
3				UPL species 0 x 5 = 0
4		· 		Column Totals: 100 (A) 370 (B)
5				
6				Prevalence Index = B/A = 3.70
	30%	= Total Cov	er er	Hydrophytic Vegetation Indicators:
50% of total cover: _ 15	% 20% of	total cover:	- 6%	1 - Rapid Test for Hydrophytic Vegetation
Shrub Stratum (Plot size: 20'x20')	2070 01	10101 00101		2 - Dominance Test is >50%
_				3 - Prevalence Index is ≤3.0 ¹
1				4 - Morphological Adaptations ¹ (Provide supporting
2				data in Remarks or on a separate sheet)
3	-	· -		Problematic Hydrophytic Vegetation ¹ (Explain)
4				
5		· 	· ——	¹ Indicators of hydric soil and wetland hydrology must
6				be present, unless disturbed or problematic.
		= Total Cov	er er	Definitions of Five Vegetation Strata:
50% of total cover:	20% of	total cover:		The Mandage of the Control of the Co
Herb Stratum (Plot size: 20'x20')				Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in.
1. Diphasiastrum digitatum	25%	YES	FACU	(7.6 cm) or larger in diameter at breast height (DBH).
2				Continue Was de plante avaledin a construir a
2		•		Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less
3				than 3 in. (7.6 cm) DBH.
٠	_	· -		Shrub – Woody plants, excluding woody vines,
5				approximately 3 to 20 ft (1 to 6 m) in height.
6				
7				Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody
8				plants, except woody vines, less than approximately 3
9				ft (1 m) in height.
10		· 		Woody vine – All woody vines, regardless of height.
11				Woody Ville - All Woody Villes, regardless of fleight.
	25%	= Total Cov	er er	
50% of total cover: _12.	5% 20% of	total cover:	: 5%	
Woody Vine Stratum (Plot size: 20'x20')				
1				
3				
4				
5				Hydrophytic
		= Total Cov	er er	Vegetation Present? Yes No
50% of total cover:	20% of	total cover:		Present? Yes NoX
Remarks: (Include photo numbers here or on a separate	sheet.)			

Sampling Point: DP-4, UPL

Profile Desc	ription: (Describe	to the dept	h needed to docun	ent the in	dicator o	or confirm	n the absence of indicators.)
Depth	Matrix		Redox	(Features			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture Remarks
0-4	10YR 4/3	100					Sandy Loam_
4-10	10YR 5/6	100					Sandy Loam
10-18	10YR 6/4	100					Sandy Loam
	-						
						·	·
							
1Tuno: C. C.		lotion DM	Daduard Matrix MC	Mooked			21 continue DI Doro Lining M Motrice
Hydric Soil I	oncentration, D=Dep Indicators:	ietion, Rivi=	Reduced Matrix, MS	=IVIasked :	Sand Gra	iins.	² Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils ³ :
Histosol			Dark Surface	(S7)			2 cm Muck (A10) (MLRA 147)
	pipedon (A2)		Polyvalue Be		e (S8) (M	LRA 147,	
Black Hi			Thin Dark Su				(MLRA 147, 148)
	n Sulfide (A4)		Loamy Gleye			. ,	Piedmont Floodplain Soils (F19)
Stratified	d Layers (A5)		Depleted Mat				(MLRA 136, 147)
2 cm Mu	ick (A10) (LRR N)		Redox Dark S				Very Shallow Dark Surface (TF12)
	d Below Dark Surfac	e (A11)	Depleted Dar				Other (Explain in Remarks)
	ark Surface (A12)		Redox Depre				
	Mucky Mineral (S1) (L	_RR N,	Iron-Mangane		s (F12) (L	RR N,	
	\ 147, 148)		MLRA 136	•	AL DA 40	c 400)	31. disatana at huduankutia wa matatian and
	Bleyed Matrix (S4) Redox (S5)		Umbric Surfa Piedmont Flo				³ Indicators of hydrophytic vegetation and wetland hydrology must be present,
	Matrix (S6)		Red Parent M				
	_ayer (if observed):	i	Red r arent iv	iateriai (i Z	i) (WILIX)	1 121, 141	unless disturbed of problematic.
Type:							
	ches):		 ;				Hydric Soil Present? Yes No X
Remarks:	,						
· · · · · · · · · · · · · · · · · · ·							

Project/Site: Cumberland County Property City/Co	unty: Cumberland County Sampling Date: 4/2/2018
· · · · · · · · · · · · · · · · · · ·	State: VA Sampling Point: DP-5
Investigator(s): Hannah L. Miller, Robert Goodwin Section	n, Township, Range: _ Tax Map # 44-A-13
Landform (hillslope, terrace, etc.): Floodplain Local relie	
Subregion (LRR or MLRA):	
Soil Map Unit Name: Poindexter Wedowee complex	NWI classification: R3
Are climatic / hydrologic conditions on the site typical for this time of year? Ye	· · · · · · · · · · · · · · · · · · ·
Are Vegetation, Soil, or Hydrology significantly disturbed	
Are Vegetation, Soil, or Hydrology naturally problemati	c? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing samp	oling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes X No	Is the Sampled Area
	within a Wetland? Yes X No
Wetland Hydrology Present? Yes X No	
Remarks:	
Data point was taken next to flag C-7.	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) True Aquatic Plants (B	14) Sparsely Vegetated Concave Surface (B8)
Saturation (A3) Oxidized Rhizospheres	on Living Roots (C3) Moss Trim Lines (B16)
Water Marks (B1) Presence of Reduced I	ron (C4) Dry-Season Water Table (C2)
Sediment Deposits (B2) Recent Iron Reduction	in Tilled Soils (C6) Crayfish Burrows (C8)
Drift Deposits (B3) Thin Muck Surface (C7) Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4) Other (Explain in Rema	arks) Stunted or Stressed Plants (D1)
Iron Deposits (B5)	X Geomorphic Position (D2)
Inundation Visible on Aerial Imagery (B7)	Shallow Aquitard (D3)
X Water-Stained Leaves (B9)	Microtopographic Relief (D4)
X Aquatic Fauna (B13)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes NoX Depth (inches):	
Water Table Present? Yes X No Depth (inches): 4"	
Saturation Present? Yes No _X_ Depth (inches):	Wetland Hydrology Present? Yes X No
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous forms are considered by the control of the contr	ous inspections) if available:
Describe recorded bata (stream gauge, monitoring well, acrial priotos, previ	ous inspections), il available.
Remarks:	
B13: Small fish were present within the stream.	

/EGETATION (Five Strata) – Use scientific na	mes of _l	olants.		Sampling Point: DP-5
	Absolute	Dominant	Indicator	Dominance Test worksheet:
,		Species?		Number of Dominant Species
1. Betula nigra	25%	YES	FACW	That Are OBL, FACW, or FAC: 4 (A)
2. Liquidambar styraciflua	30%	YES	FAC	Total Number of Dominant
3. Acer rubrum	10%	YES	FAC	Species Across All Strata: 5 (B)
4				
5				Percent of Dominant Species That Are OBL, FACW, or FAC: 80% (A/B)
6.				That Ale OBL, FACW, of FAC (A/B)
0	65%	= Total Cov		Prevalence Index worksheet:
22.50				Total % Cover of: Multiply by:
50% of total cover: <u>32.5</u> °	<u></u> 20% of	total cover:	13%	OBL species x 1 =
Sapling Stratum (Plot size: 20'x20')				FACW species x 2 =
1. Lindera benzoin	10%	YES	FAC	FAC species x 3 =
2				
3				FACU species x 4 =
4				UPL species x 5 =
5				Column Totals: (A) (B)
6.				Prevalence Index = B/A =
0	10%	= Total Cov		
5 0/				Hydrophytic Vegetation Indicators:
50% of total cover: 5%	20% of	total cover:	2%	1 - Rapid Test for Hydrophytic Vegetation
Shrub Stratum (Plot size: 20'x20')				✓ 2 - Dominance Test is >50%
1. Microstegium vimineum	15%	YES	FAC	3 - Prevalence Index is ≤3.0 ¹
2				4 - Morphological Adaptations ¹ (Provide supporting
3				data in Remarks or on a separate sheet)
4				Problematic Hydrophytic Vegetation ¹ (Explain)
5				
6.				¹ Indicators of hydric soil and wetland hydrology must
0	15%	= Total Cov		be present, unless disturbed or problematic.
				Definitions of Five Vegetation Strata:
50% of total cover: <u>7.5%</u>	20% of	total cover:	3%	Tree – Woody plants, excluding woody vines,
Herb Stratum (Plot size: 20'x20')				approximately 20 ft (6 m) or more in height and 3 in.
1				(7.6 cm) or larger in diameter at breast height (DBH).
2				Sapling – Woody plants, excluding woody vines,
3				approximately 20 ft (6 m) or more in height and less
4.				than 3 in. (7.6 cm) DBH.
5.				Shrub – Woody plants, excluding woody vines,
6				approximately 3 to 20 ft (1 to 6 m) in height.
· ·				Hank All banks as a configuration of the first of the fir
7				Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody
8				plants, except woody vines, less than approximately 3
9				ft (1 m) in height.
10				Woody vine – All woody vines, regardless of height.
11				Trocay tino 7 in woody tinos, regardloss of height.
	:	= Total Cov	er	
50% of total cover:	20% of	total cover:		
Woody Vine Stratum (Plot size: 20'x20')	_			
1. Smilax rotundifolia	10%	YES	FAC	
···				
2				
3				
4				
5				Hydrophytic
	10%	= Total Cov	er	Vegetation
50% of total cover: 5%	20% of	total cover:	2%	Present? Yes X No
				l
Remarks: (Include photo numbers here or on a separate sh	eet.)			

Sampling Point: DP-5

	Matrix Color (moist)	%	Color (moist)	ox Features %	Type ¹	Loc ²	Texture		Remarks	
inches) 0-3	10YR 3/3	100	Coloi (Illoist)	70	туре	LUC	Sandy Loa		Remarks	
	-							-		
3-18	10YR 6/2	85	7.5YR 5/8	15	С	PL_	Sandy Loan	າ		
<u> </u>										
								-		
					_					
/po: C-C	ancontration D-Do	nlotion PM	=Reduced Matrix, M	S_Mackad S	Sand Gra	inc	² Location: D		ing, M=Matrix.	
	Indicators:	pielion, Kivi	=Reduced Matrix, M	S=IVIASKEU S	banu Gra	1115.			roblematic Hy	dric Soils
Histosol			Dark Surfac	e (S7)					A10) (MLRA 1	
	oipedon (A2)		Polyvalue B		(S8) (M	LRA 147.			Redox (A16)	- 11)
Black Hi			Thin Dark S		. , .			(MLRA 14	, ,	
	n Sulfide (A4)		Loamy Gley			•	P		oodplain Soils	(F19)
Stratified	d Layers (A5)		X Depleted Ma	atrix (F3)				(MLRA 13		
	ick (A10) (LRR N)			Surface (F6)				•	v Dark Surface	, ,
	Below Dark Surfac	ce (A11)	Depleted Da				<u> </u>	ther (Expla	in in Remarks)
	ark Surface (A12)	I DD N	Redox Depr			DD N				
	lucky Mineral (S1) (\ 147, 148)	LKK N,	Iron-Mangar		6 (F 12) (L	.KK N,				
	Gleyed Matrix (S4)		Umbric Surf	•	LRA 13	5. 122)	³ Ind	icators of h	ydrophytic veg	etation and
	ledox (S5)		Piedmont FI						logy must be p	
-	Matrix (S6)			Material (F2				-	ed or problem	
	_ayer (if observed)):								
	_ayer (if observed)):								
estrictive I):					Hydric Soil	Present?	Yes X	No
strictive I Type: Depth (inc):					Hydric Soil	Present?	Yes X	No
strictive I Type: Depth (inc):	<u></u>				Hydric Soil	Present?	Yes X	. No
strictive I Type: Depth (inc):	<u> </u>				Hydric Soil	Present?	Yes_X	No
strictive I Type: Depth (inc):	<u> </u>				Hydric Soil	Present?	Yes X	. No
strictive I Type: Depth (inc):					Hydric Soil	Present?	Yes_X	No
strictive I Type: Depth (ind):					Hydric Soil	Present?	Yes X	No
strictive I Type: Depth (ind):					Hydric Soil	Present?	Yes X	No
strictive I Type: Depth (inc):					Hydric Soil	Present?	Yes X	No
strictive I Type: Depth (ind):					Hydric Soil	Present?	Yes_X	No
strictive I Type: Depth (ind):					Hydric Soil	Present?	Yes X	No
strictive I Type: Depth (ind):					Hydric Soil	Present?	Yes X	No
strictive I Type: Depth (ind):					Hydric Soil	Present?	Yes X	No
strictive I Type: Depth (ind):					Hydric Soil	Present?	Yes_X	No
strictive I Type: Depth (ind):					Hydric Soil	Present?	Yes_X	No
strictive I Type: Depth (ind):					Hydric Soil	Present?	Yes X	No
Type: Depth (inc):					Hydric Soil	Present?	Yes X	No
estrictive L Type:):					Hydric Soil	Present?	Yes X	No
Type: Depth (inc):					Hydric Soil	Present?	Yes X	No
Type: Depth (inc):					Hydric Soil	Present?	Yes X	No
Type: Depth (inc):					Hydric Soil	Present?	Yes X	No
Type: Depth (inc):					Hydric Soil	Present?	Yes X	No
Type: Depth (inc):					Hydric Soil	Present?	Yes X	No

Project/Site: Cumberland Cou	nty Property	City/County: C	umberland Co	unty _{Samp}	oling Date: 4/2/2018
Applicant/Owner: CWV, LLC; c/o J		_ , , , _			mpling Point: <u>DP-5, UPL</u>
Investigator(s): Hannah L. Miller		Section, Townsh	nip. Range: Tax N	Лар #44-A-13	1 5 1 = 1 = 1 = 1
Landform (hillslope, terrace, etc.): <u>H</u>					Slope (%): 3-5%
Subregion (LRR or MLRA): n/a					
Soil Map Unit Name: Poindexter V				NWI classification:	
Are climatic / hydrologic conditions o		of year? Yes X		, explain in Remarks	
Are Vegetation, Soil,					? Yes X No
Are Vegetation, Soil,				n any answers in Re	
Are vegetation, ooii,	or rrydrologyrialdraily	y problematic:	(II riceded, explain	n any answers in re	smarks.)
SUMMARY OF FINDINGS -	Attach site map show	ing sampling p	oint locations,	transects, imp	ortant features, etc.
Hydrophytic Vegetation Present?	Yes No_X_	lo the Sa	mulad Araa		
Hydric Soil Present?	Yes No_X		mpled Area Wetland?	Yes No	o X
Wetland Hydrology Present?	Yes No X				
Remarks:					
Data point was taken adjac	ent to flag C-7.				
HYDROLOGY					
Wetland Hydrology Indicators:			Seco	ondary Indicators (m	ninimum of two required)
Primary Indicators (minimum of one	e is required; check all that ap	ply)		Surface Soil Cracks	
Surface Water (A1)	True Aquat				Concave Surface (B8)
High Water Table (A2)		Sulfide Odor (C1)		Drainage Patterns (
Saturation (A3)		hizospheres on Livin		Moss Trim Lines (B	
Water Marks (B1)		of Reduced Iron (C4)		Dry-Season Water ⁻	
Sediment Deposits (B2)		n Reduction in Tilled		Crayfish Burrows (C	
Drift Deposits (B3)	Thin Muck	Surface (C7)	;	Saturation Visible o	n Aerial Imagery (C9)
Algal Mat or Crust (B4)	Other (Exp	lain in Remarks)	;	Stunted or Stressed	l Plants (D1)
Iron Deposits (B5)			(Geomorphic Positio	n (D2)
Inundation Visible on Aerial Im-	agery (B7)		;	Shallow Aquitard (D)3)
Water-Stained Leaves (B9)			!	Microtopographic R	elief (D4)
Aquatic Fauna (B13)				FAC-Neutral Test ([) 55)
Field Observations:	.,				
	s No X Depth (inc				
	s No _X_ Depth (inc				
Saturation Present? Yes	s No X Depth (inc	ches):	Wetland Hydro	logy Present? You	es No <u>X</u>
(includes capillary fringe) Describe Recorded Data (stream g	auge monitoring well aerial r	hotos previous insp	ctions) if available	.	
Describe Recorded Data (stream g	adge, monitoring well, denai p	motos, previous mop	otionoj, ii avaliabio	•	
Remarks:					
Nemarks.					

/EGETATION (Five Strata) – Use scientific na	mes of	olants.		Sampling Point: DP-5, UPL
201-201	Absolute	Dominant		Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size: 20'x20')		Species?		Number of Dominant Species
1. Liriodendron tulipfera	30%	YES	FACU	That Are OBL, FACW, or FAC: 1 (A)
2. Pinus taeda	25%	YES	FAC	Total Number of Dominant
3. Fagus grandifolia	15%	YES	FACU	Species Across All Strata: 5 (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 20% (A/B)
6				
	70%	= Total Cove	er	Prevalence Index worksheet:
50% of total cover: 35%	20% of	total cover:	14%	Total % Cover of: Multiply by:
Sapling Stratum (Plot size: 20'x20')		•	<u> </u>	OBL species 0 x 1 = 0
	10%	YES	FACU	FACW species 0 $x = 0$
2. Fagus grandifolia			FACU	FAC species 25 $x 3 = 75$
3				FACU species x 4 = 0
4				UPL species $0 \times 5 = 0$
5				Column Totals: (A) (B)
6				Prevalence Index = B/A = 3.75
0		= Total Cove		Hydrophytic Vegetation Indicators:
100/				1 - Rapid Test for Hydrophytic Vegetation
50% of total cover: 10%	20% of	total cover:	4 /0	2 - Dominance Test is >50%
Shrub Stratum (Plot size: 20'x20')				
1				3 - Prevalence Index is ≤3.0 ¹
2				4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
3	-			Problematic Hydrophytic Vegetation ¹ (Explain)
4				
5				¹ Indicators of hydric soil and wetland hydrology must
6				be present, unless disturbed or problematic.
		= Total Cove	er	Definitions of Five Vegetation Strata:
50% of total cover:	20% of	total cover:		Tree Meady plants avaluding woody vines
Herb Stratum (Plot size: 20'x20')				Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in.
Polystichum acrostichoides	10%	YES	FACU	(7.6 cm) or larger in diameter at breast height (DBH).
2				Sapling – Woody plants, excluding woody vines,
3				approximately 20 ft (6 m) or more in height and less
4.	,			than 3 in. (7.6 cm) DBH.
5	,			Shrub – Woody plants, excluding woody vines,
6				approximately 3 to 20 ft (1 to 6 m) in height.
7				Herb – All herbaceous (non-woody) plants, including
8				herbaceous vines, regardless of size, and woody
9				plants, except woody vines, less than approximately 3 ft (1 m) in height.
10				it (1 m) in neight.
11.				Woody vine – All woody vines, regardless of height.
		= Total Cove		
500/ (t				
50% of total cover: <u>5%</u>	20% of	total cover:	2%	
Woody Vine Stratum (Plot size: 20'x20')				
1				
2				
3				
4				
5				Hydrophytic
		= Total Cove	er	Vegetation
50% of total cover:	20% of	total cover:		Present? Yes No X
Remarks: (Include photo numbers here or on a separate sh	neet.)			I

Sampling Point: DP-5, UPL

	Matrix	%	Redox Features	Type ¹ Loc ²	Texture		Domorle	
(inches) 0-4	Color (moist)	100	Color (moist) %	Type Loc			Remarks	5
	10YR 5/3				Sandy Lo	<u>a</u> m		
4-10	10YR 5/6	100			Sandy Loa	<u>m</u>		
10-18	10YR 6/6	100			Sandy Loar	<u> </u>		
						_		
						_		
						_		
			<u> </u>					
ype: C=Co	oncentration, D=Dep	pletion, RM=	Reduced Matrix, MS=Masked S	and Grains.	² Location:	PL=Pore Lini	ng, M=Matri	х.
	Indicators:					icators for P		
_ Histosol	(A1)		Dark Surface (S7)		_	2 cm Muck (410) (MLRA	147)
	pipedon (A2)		Polyvalue Below Surface		148)	Coast Prairie		6)
_ Black His			Thin Dark Surface (S9) (N			(MLRA 14		(= 1.5)
	n Sulfide (A4)		Loamy Gleyed Matrix (F2))	_	Piedmont Flo		s (F19)
	d Layers (A5) ick (A10) (LRR N)		Depleted Matrix (F3)Redox Dark Surface (F6)			(MLRA 13 Very Shallov		م (TF12)
	d Below Dark Surfac	ce (A11)	Depleted Dark Surface (F			Other (Expla		. ,
	ark Surface (A12)	,	Redox Depressions (F8)	,	_			-,
_ Sandy M	lucky Mineral (S1) (LRR N,	Iron-Manganese Masses	(F12) (LRR N ,				
	A 147, 148)		MLRA 136)		2			
-	Sleyed Matrix (S4)		Umbric Surface (F13) (MI			ndicators of h		-
-	ledox (S5)		Piedmont Floodplain Soils			wetland hydro		
	Matrix (S6) _ayer (if observed)	\ <u>-</u>	Red Parent Material (F21) (IVILKA 127, 147	')	unless disturb	ed or proble	matic.
	Layer (II Observed)							
Туре:					Hudric S	oil Brosont?	Vos	No X
Type:			_		Hydric S	oil Present?	Yes	No <u></u> ×
Type:					Hydric S	oil Present?	Yes	No_X
Type:			<u> </u>		Hydric S	oil Present?	Yes	No_ <u>×</u> _
Type:					Hydric S	oil Present?	Yes	No_X
Type:					Hydric S	oil Present?	Yes	No <u></u> ×
Type:					Hydric So	oil Present?	Yes	No <u>×</u>
Type:					Hydric S	oil Present?	Yes	No ×
Type:					Hydric S	oil Present?	Yes	No X
Type: Depth (inc					Hydric S	oil Present?	Yes	No X
Type:					Hydric S	oil Present?	Yes	No <u></u>
Type:					Hydric S	oil Present?	Yes	No X
Type:					Hydric S	oil Present?	Yes	No ×
Type:					Hydric S	oil Present?	Yes	No X
Type:					Hydric S	oil Present?	Yes	No X
Type:					Hydric S	oil Present?	Yes	No X
Type:					Hydric S	oil Present?	Yes	No X
Type:					Hydric S	oil Present?	Yes	No X
Type:					Hydric S	oil Present?	Yes	No X
Type:					Hydric S	oil Present?	Yes	No X
Type:					Hydric S	oil Present?	Yes	No X
Type:					Hydric S	oil Present?	Yes	No X
Type:					Hydric S	oil Present?	Yes	No X

Project/Site: Cumberland County	/ Property c	City/County: Cumberland	d County	Sampling Date: 4/2/2018
Applicant/Owner: CWV, LLC; c/o James H				Sampling Point: DP-6
Investigator(s): Shannon D. Hill		Section, Township, Range:	Tax Map #	
Landform (hillslope, terrace, etc.): Floo	odplain Loc:	al relief (concave, convex, no	ine).	Slone (%): 1-3%
Subregion (LRR or MLRA): n/a				
Soil Map Unit Name: Pacolet-Watere			NWI classific	
•				
Are climatic / hydrologic conditions on th			(If no, explain in R	
Are Vegetation, Soil, or I				present? Yes X No
Are Vegetation, Soil, or I	Hydrologynaturally prob	olematic? (If needed,	explain any answe	rs in Remarks.)
SUMMARY OF FINDINGS – A	ttach site man showing	sampling point location	ons transects	important features etc.
				,
Hydrophytic Vegetation Present?	Yes X No	Is the Sampled Area	~	
Hydric Soil Present?	Yes X No	within a Wetland?	$_{Yes}$ $\underline{\hspace{1.5cm} imes}$	No
Wetland Hydrology Present?	Yes X No			
Remarks:				
Data point was taken next to fl	lag D-28			
Data point was taken next to in	ag D 20.			
HYDROLOGY				
Wetland Hydrology Indicators:			Secondary Indica	ators (minimum of two required)
Primary Indicators (minimum of one is	required: check all that apply)		Surface Soil	
Surface Water (A1)	True Aquatic Pla	unto (R14)		getated Concave Surface (B8)
High Water Table (A2)	Hydrogen Sulfide		X Drainage Pa	
		pheres on Living Roots (C3)	-	
Saturation (A3)		·		
Water Marks (B1)	Presence of Rec			Water Table (C2)
Sediment Deposits (B2)		uction in Tilled Soils (C6)	Crayfish Bur	
Drift Deposits (B3)	Thin Muck Surfa			isible on Aerial Imagery (C9)
Algal Mat or Crust (B4)	Other (Explain in	i Remarks)		tressed Plants (D1)
Iron Deposits (B5)	.m. (DZ)		X Geomorphic	
Inundation Visible on Aerial Image X Water-Stained Leaves (B9)	ту (Б <i>т</i>)		Shallow Aqu	
				aphic Relief (D4)
Aquatic Fauna (B13)			FAC-Neutral	Test (D5)
Field Observations:	No X Depth (inches):			
	X No Depth (inches):			
1				· · · · · · · · · · · · · · · · · · ·
Saturation Present? Yes (includes capillary fringe)	No X Depth (inches):	Wetland I	Hydrology Preser	nt? Yes <u>X</u> No
Describe Recorded Data (stream gaug	je, monitoring well, aerial photos	s, previous inspections), if ava	ailable:	
Remarks:				

/EGETATION (Five Strata) – Use scientific na	ames of	plants.		Sampling Point: DP-6
· · · · · · · · · · · · · · · · · · ·	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 20'x20')	% Cover	Species?		Number of Dominant Species
1. Liquidambar styraciflua	20%	YES	FAC	That Are OBL, FACW, or FAC: 6 (A)
2. Acer rubrum	20%	YES	FAC	
3. Prunus serotina	15%	YES	FACU	Total Number of Dominant Species Across All Strata: 7 (B)
** <u></u>	1070			Species Across All Strata: (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 85% (A/B)
6				Prevalence Index worksheet:
	65%	= Total Cov	er er	
50% of total cover: 32.5	5% _{20% of}	total cover:	13%	Total % Cover of: Multiply by:
Sapling Stratum (Plot size: 20'x20')				OBL species x 1 =
1. Carpinus caroliniana	20%	YES	FAC	FACW species x 2 =
2. Salix nigra	5%	YES	OBL	FAC species x 3 =
<u></u>				FACU species x 4 =
3				UPL species x 5 =
4				Column Totals: (A) (B)
5				Octamin rotals: (r) (b)
6				Prevalence Index = B/A =
	25%	= Total Cov	er	Hydrophytic Vegetation Indicators:
50% of total cover: 12.5				1 - Rapid Test for Hydrophytic Vegetation
	20% of	total cover:	2 70	2 - Dominance Test is >50%
Shrub Stratum (Plot size: 20'x20')	4=0/	\/=0	= 4.0	
1. Polystichum acrostichoides	15%	YES	FAC	3 - Prevalence Index is ≤3.0¹
2				4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
3				
4				Problematic Hydrophytic Vegetation ¹ (Explain)
5				
6.				¹ Indicators of hydric soil and wetland hydrology must
0	15%	T		be present, unless disturbed or problematic.
		= Total Cov		Definitions of Five Vegetation Strata:
50% of total cover: <u>7.5%</u>	20% of	total cover:	:_3%	Tree – Woody plants, excluding woody vines,
Herb Stratum (Plot size: 20'x20')				approximately 20 ft (6 m) or more in height and 3 in.
1				(7.6 cm) or larger in diameter at breast height (DBH).
2				One Prop. Manches Institute and the Property of the
ā				Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less
3				than 3 in. (7.6 cm) DBH.
4				
5				Shrub – Woody plants, excluding woody vines,
6				approximately 3 to 20 ft (1 to 6 m) in height.
7				Herb - All herbaceous (non-woody) plants, including
8				herbaceous vines, regardless of size, and woody
9			. ,	plants, except woody vines, less than approximately 3
				ft (1 m) in height.
10				Woody vine – All woody vines, regardless of height.
11				
		= Total Cov	er er	
50% of total cover:	20% of	total cover:		
Woody Vine Stratum (Plot size: 20'x20')				
1. Smilax rotundifolia	5%	YES	FAC	
3		· - <u></u>	· ——	
4				
5				Hydrophytic
	5%	= Total Cov	er er	Vegetation
50% of total cover: 2.5	% 20% of	total cover	1%	Present? Yes X No
Remarks: (Include photo numbers here or on a separate s				
Tomano. (morado prioto namboro nere or on a separate s				

Sampling Point: DP-6

Profile Desc	ription: (Describe	to the dept	h needed to docun	nent the i	ndicator	or confirm	the absence of indicators.)
Depth	Matrix		Redox	k Features	3		
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture Remarks
0-4	10YR 3/3	100					Sandy Loam
4-18	10YR 6/1	90	7.5YR 5/8	10	C	PL	Sandy Loam
	10111071		7.0111070				
	-						
	-						
	-						
¹Type: C=Co	oncentration, D=Dep	etion RM=	Reduced Matrix, MS	=Masked	Sand Gra	ains.	² Location: PL=Pore Lining, M=Matrix.
Hydric Soil		0.0011, 1.001	rtoadood matrix, me	-Maonoa	Cana Cit	AII 10.	Indicators for Problematic Hydric Soils ³ :
Histosol			Dark Surface	(\$7)			2 cm Muck (A10) (MLRA 147)
	pipedon (A2)		Polyvalue Be		(S8) (M	II D A 1/17	
Black Hi	. , ,		Thin Dark Su				(MLRA 147, 148)
	en Sulfide (A4)		Loamy Gleye			-1, 140)	Piedmont Floodplain Soils (F19)
	d Layers (A5)		Depleted Mat	,	1 2)		(MLRA 136, 147)
	ick (A10) (LRR N)		Redox Dark S		·6)		Very Shallow Dark Surface (TF12)
	d Below Dark Surface	- (Δ11)	Depleted Dar	,	,		Other (Explain in Remarks)
	ark Surface (A12)	,,,,,	Redox Depre				
	lucky Mineral (S1) (L	.RR N.	Iron-Mangane			LRR N.	
	\ 147, 148)	,	MLRA 136		` / `	•	
	Bleyed Matrix (S4)		Umbric Surfa		MLRA 13	6, 122)	³ Indicators of hydrophytic vegetation and
	ledox (S5)		Piedmont Flo				
	Matrix (S6)		Red Parent M				
Restrictive I	_ayer (if observed):						
Type:							
Depth (inc	ches):						Hydric Soil Present? Yes X No
Remarks:	, -						
. tomaino.							

Project/Site: Cumberland Coun	ty Property	City/County: (Cumberlan	nd County	Sampling Date: 4/2/2018
Applicant/Owner: CWV, LLC; c/o Jan		, ,			Sampling Point: <u>DP-6, UPL</u>
Investigator(s): Hannah L. Miller,		Section, Towns	hip. Range:	Tax Map #44-A	
Landform (hillslope, terrace, etc.): Hil					
	Lat: 37.561				Datum:
Soil Map Unit Name: Poindexter We			-	NWI classific	
Are climatic / hydrologic conditions on		\ /		(If no, explain in F	
Are Vegetation, Soil, o	* *	•			present? Yes X No
Are Vegetation, Soil, o				explain any answe	
Are vegetation, Soil, o	Пориготодупациа	ily problematic?	(II rieeded,	, explain any answe	ers in Remarks.)
SUMMARY OF FINDINGS - A	Attach site map show	wing sampling p	oint locati	ions, transects	s, important features, etc.
Hydrophytic Vegetation Present?	Yes No_X	la tha C	ampled Area		
Hydric Soil Present?	Yes No_X	.00 0	ampled Area Wetland?	Yes	No <u>X</u>
Wetland Hydrology Present?	Yes No X				
Remarks:					
Data point was taken adjace	nt to flag D-28.				
HYDROLOGY					
Wetland Hydrology Indicators:				Secondary Indica	ators (minimum of two required)
Primary Indicators (minimum of one i	s required: check all that a	nnly)		Surface Soil	
Surface Water (A1)		atic Plants (B14)			getated Concave Surface (B8)
High Water Table (A2)		Sulfide Odor (C1)		Drainage Pa	
Saturation (A3)	· -	Rhizospheres on Livir	na Roots (C3)		
Water Marks (B1)		of Reduced Iron (C4)	-		Water Table (C2)
Sediment Deposits (B2)		on Reduction in Tilled		Crayfish Bur	
Drift Deposits (B3)		k Surface (C7)	()	· ·	isible on Aerial Imagery (C9)
Algal Mat or Crust (B4)		plain in Remarks)			stressed Plants (D1)
Iron Deposits (B5)					Position (D2)
Inundation Visible on Aerial Imag	gery (B7)			Shallow Aqu	
Water-Stained Leaves (B9)				Microtopogra	aphic Relief (D4)
Aquatic Fauna (B13)				FAC-Neutra	Test (D5)
Field Observations:					
Surface Water Present? Yes _	No X Depth (in	nches):			
Water Table Present? Yes _	No X Depth (in	nches):			
Saturation Present? Yes _	No X Depth (in	nches):	Wetland	Hydrology Presei	nt? Yes No <u>X</u>
(includes capillary fringe)				- labla	
Describe Recorded Data (stream gau	ige, monitoring well, aerial	pnotos, previous insp	ections), if av	/allable:	
Remarks:					
1					

/EGETATION (Five Strata) – Use scientific na	mes of	plants.		Sampling Point: DP-6, UPL
001-001	Absolute	Dominant		Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size: 20'x20'		Species?		Number of Dominant Species
1. Liriodendron tulipfera	25%	YES	FACU	That Are OBL, FACW, or FAC: 2 (A)
2. <u>Liquidambar styraciflua</u>	20%	YES	FAC	Total Number of Dominant
3. <u>Diospyros virginiana</u>	10%	NO	FAC	Species Across All Strata: 5 (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 40% (A/B)
6				Prevalence Index worksheet:
	55%	= Total Cove	er	
50% of total cover: 27.5	<u>%</u> 20% of	total cover:	11%	Total % Cover of: Multiply by:
Sapling Stratum (Plot size: 20'x20'				OBL species $0 \times 1 = 0$
1. Pinus taeda	20%	YES	FAC	FACW species 0 $x = 0$
2. Fagus grandifolia	10%	YES	FACU	FACUL species 50 x 3 = 150 FACUL species 50 x 4 = 200
3				17100 species x + =
4				UPL species 0 $x = 0$
5				Column Totals:(A)
6.				Prevalence Index = B/A = 3.50
<u> </u>	30%	= Total Cove	er	Hydrophytic Vegetation Indicators:
50% of total cover: _ 15%				1 - Rapid Test for Hydrophytic Vegetation
	<u>20%</u> 01	total cover:	070	2 - Dominance Test is >50%
Shrub Stratum (Plot size: 20'x20')				3 - Prevalence Index is ≤3.0¹
1				4 - Morphological Adaptations ¹ (Provide supporting
2				data in Remarks or on a separate sheet)
3				Problematic Hydrophytic Vegetation ¹ (Explain)
4				
5		· 		¹ Indicators of hydric soil and wetland hydrology must
6				be present, unless disturbed or problematic.
		= Total Cove	er	Definitions of Five Vegetation Strata:
50% of total cover:	20% of	total cover:		Tree – Woody plants, excluding woody vines,
Herb Stratum (Plot size: 20'x20')				approximately 20 ft (6 m) or more in height and 3 in.
Polystichum acrostichoides	15%	YES	FACU	(7.6 cm) or larger in diameter at breast height (DBH).
2				Sapling – Woody plants, excluding woody vines,
3				approximately 20 ft (6 m) or more in height and less
4				than 3 in. (7.6 cm) DBH.
5				Shrub – Woody plants, excluding woody vines,
6				approximately 3 to 20 ft (1 to 6 m) in height.
7				Herb – All herbaceous (non-woody) plants, including
8				herbaceous vines, regardless of size, and woody
9				plants, except woody vines, less than approximately 3 ft (1 m) in height.
10		·		
11				Woody vine – All woody vines, regardless of height.
		= Total Cove	er	
50% of total cover: 7.5%				
Woody Vine Stratum (Plot size: 20'x20')	20 /0 01	total oover.	070	
1				
2				
3				
5				Hydrophytic
		= Total Cove		Vegetation Present? Yes No_ X
50% of total cover:	20% of	total cover:		100 NO
Remarks: (Include photo numbers here or on a separate sl	heet.)			

Sampling Point: DP-6, UPL

	Matrix		Redox Features	Texture	Decreate	
inches) 0-4	Color (moist) 10YR 5/3	100	Color (moist) % Type ¹ L		Remarks	
		 -		Sandy Loam		
4-18	10YR 6/4	100		Sandy Loam		
				<u> </u>		
						
						
				2, ,, ,, ,		
	ncentration, D=De	epletion, RM=R	educed Matrix, MS=Masked Sand Grains	Location: PL=Po	ore Lining, M=Matrix of for Problematic H	vdric Soile ³
_ Histosol			Dark Surface (S7)		Muck (A10) (MLRA	
	ipedon (A2)		Polyvalue Below Surface (S8) (MLR		Prairie Redox (A16	
_ Histic Ep _ Black His			Thin Dark Surface (S9) (MLRA 147,		.RA 147, 148))
	n Sulfide (A4)		Loamy Gleyed Matrix (F2)		ont Floodplain Soils	s (F19)
	Layers (A5)		Depleted Matrix (F3)		.RA 136, 147)	` ,
_ 2 cm Mu	ck (A10) (LRR N)		Redox Dark Surface (F6)		Shallow Dark Surfac	. ,
	Below Dark Surfa	ice (A11)	Depleted Dark Surface (F7)	Other	(Explain in Remarks	s)
	rk Surface (A12)		Redox Depressions (F8)			
	ucky Mineral (S1)	(LRR N,	Iron-Manganese Masses (F12) (LRR	l,		
	147, 148) leyed Matrix (S4)		MLRA 136) Umbric Surface (F13) (MLRA 136, 1	3Indicate	rs of hydrophytic ve	actation and
	edox (S5)		Piedmont Floodplain Soils (F19) (ML		I hydrology must be	-
	Matrix (S6)		Red Parent Material (F21) (MLRA 12		disturbed or problen	
	ayer (if observed	l):		, ,		
Type:						
. , , , ,	thes):			Hydric Soil Pres	sent? Yes	No <u></u>
	,, i i c s)					
Depth (inc						
Depth (inc	<u></u>					
Depth (inc						
Depth (inc	<u></u>					
Depth (inc						
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Depth (inc	ines).					
Depth (inc	ines).					
Depth (inc	ines).					
Depth (inc	ines).					
Depth (inc	ines).					

Project/Site: Cumberland	County Prope	erty _{Cit}	v/County: Cumberla	nd County	Sampling Date: 4/2/2018
Applicant/Owner: CWV, LLC; of	c/o James H. Martin				Sampling Point: DP-7
Investigator(s): Shannon D		Se	ction Township Range		
• · · · <u> </u>					Slope (%):1-3%
					Datum:
Soil Map Unit Name: Water		Lat		NWI classifi	
Are climatic / hydrologic condit		minal fan Hein Hann afau			
· · · · ·		· · · · · · · · · · · · · · · · · · ·			present? Yes X No
Are Vegetation, Soil	-				
Are Vegetation, Soil	, or Hydrolog	y naturally proble	ematic? (If needed	l, explain any answ	ers in Remarks.)
SUMMARY OF FINDIN	GS – Attach s	ite map showing s	ampling point locat	tions, transect	s, important features, etc.
Hydrophytic Vegetation Pres	ent? Yes	X No	Is the Sampled Area	a	
Hydric Soil Present?		X No	within a Wetland?	$_{Yes}$ $ imes$	No
Wetland Hydrology Present?	Yes _	X No			
Remarks:					
Data point was taken	next to flag D-8	4.			
HYDROLOGY					
Wetland Hydrology Indicat	ore:			Secondary India	ators (minimum of two required)
		: chack all that apply)			
Primary Indicators (minimum	or one is required.		(D4.4)		l Cracks (B6)
Surface Water (A1)		True Aquatic Plant			egetated Concave Surface (B8)
		Hydrogen Sulfide		∑ Drainage Pa	
Saturation (A3)			neres on Living Roots (C3		
Water Marks (B1)		Presence of Redu			Water Table (C2)
Sediment Deposits (B2)			ction in Tilled Soils (C6)	Crayfish Bu	
Drift Deposits (B3)		Thin Muck Surface			/isible on Aerial Imagery (C9) Stressed Plants (D1)
Algal Mat or Crust (B4)		Other (Explain in F	Remarks)	Stunted or S X Geomorphic	
Iron Deposits (B5) Inundation Visible on Ae	rial Imagary (P7)			Shallow Aqu	
X Water-Stained Leaves (E					raphic Relief (D4)
Aquatic Fauna (B13)	59)			FAC-Neutra	
			1	FAC-Neutra	ii resi (D3)
Field Observations:	Mar. Na	Y Don'th Cook on			
Surface Water Present?		Depth (inches): _			
Water Table Present?	·	Depth (inches): _			×
Saturation Present? (includes capillary fringe)	Yes No	X_ Depth (inches): _	Wetland	d Hydrology Prese	nt? Yes X No
Describe Recorded Data (str	eam gauge, monito	oring well, aerial photos,	previous inspections), if a	vailable:	
Remarks:	_				
Remarks.					

/EGETATION (Five Strata) – Use scientific na	mes of	olants.		Sampling Point: DP-7
	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 20'x20')		Species?	Status	Number of Dominant Species _
1. Acer rubrum	20%	YES	FAC	That Are OBL, FACW, or FAC: 5 (A)
2. Platanus occidentalis	20%	YES	FACW	Total Number of Dominant
3				Species Across All Strata: 6 (B)
4				
5				Percent of Dominant Species That Are OBL, FACW, or FAC: 80% (A/B)
6.				That Are OBL, FACW, OF FAC.
<u>. </u>	40%	= Total Cove		Prevalence Index worksheet:
200/				Total % Cover of: Multiply by:
50% of total cover: 20%	20% of	total cover:	070	OBL species x 1 =
Sapling Stratum (Plot size: 20'x20'	/			FACW species x 2 =
1. Carpinus caroliniana	20%	YES	FAC	FAC species x 3 =
2. Liquidambar styraciflua	20%	YES	FAC	FACU species x 4 =
3				
4				UPL species x 5 =
5				Column Totals: (A) (B)
6.				Prevalence Index = B/A =
o	40%	= Total Cove		Hydrophytic Vegetation Indicators:
000/				
50% of total cover: <u>20%</u>	20% of	total cover:	8%	1 - Rapid Test for Hydrophytic Vegetation
Shrub Stratum (Plot size: 20'x20'				✓ 2 - Dominance Test is >50%
1				3 - Prevalence Index is ≤3.0¹
2				4 - Morphological Adaptations ¹ (Provide supporting
3				data in Remarks or on a separate sheet)
4				Problematic Hydrophytic Vegetation ¹ (Explain)
5				
6				¹ Indicators of hydric soil and wetland hydrology must
0		Total Cove		be present, unless disturbed or problematic.
		= Total Cove	2 1	Definitions of Five Vegetation Strata:
50% of total cover:	20% of	total cover:		Tree – Woody plants, excluding woody vines,
Herb Stratum (Plot size: 20'x20')				approximately 20 ft (6 m) or more in height and 3 in.
1. Polystichum acrostichoides	10%	YES	FACU	(7.6 cm) or larger in diameter at breast height (DBH).
2				Sapling – Woody plants, excluding woody vines,
3				approximately 20 ft (6 m) or more in height and less
4.				than 3 in. (7.6 cm) DBH.
5.				Shrub – Woody plants, excluding woody vines,
6				approximately 3 to 20 ft (1 to 6 m) in height.
				Hank All banks as a configuration of the first state of the first stat
7				Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody
8				plants, except woody vines, less than approximately 3
9				ft (1 m) in height.
10				Woody vine – All woody vines, regardless of height.
11				Trocay time / iii need, times, regardiese et neight
	10%	= Total Cove	er	
50% of total cover: 5%	20% of	total cover:	2%	
Woody Vine Stratum (Plot size: 20'x20')	_	-		
1. Smilax rotundifolia	10%	YES	FAC	
"				
3				
4				
5				Hydrophytic
	10%	= Total Cove	er	Vegetation
50% of total cover:5%	20% of	total cover:	2%	Present? Yes X No
Remarks: (Include photo numbers here or on a separate sl	neet.)			

SOIL Sampling Point: DP-7

Profile Desc	ription: (Describe	to the dep	th needed to docur	ment the i	indicator	or confirm	n the absence of indicators.)
Depth	Matrix		Redo	x Feature	S1	. 2	
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture Remarks
0-5	10YR 3/3	100					Sandy Loam
5-18	10YR 6/2	85	7.5YR 5/6	15	C	PL_	Sandy Loam
							
							<u> </u>
		oletion, RM	=Reduced Matrix, M	S=Masked	d Sand Gra	ains.	² Location: PL=Pore Lining, M=Matrix.
Hydric Soil							Indicators for Problematic Hydric Soils ³ :
Histosol			Dark Surface		(CO) (I	U DA 447	2 cm Muck (A10) (MLRA 147)
Black Hi	pipedon (A2)		Polyvalue Be Thin Dark Su		. , .		, 148) Coast Prairie Redox (A16) (MLRA 147, 148)
	n Sulfide (A4)		Loamy Gleye			47, 140)	Piedmont Floodplain Soils (F19)
	Layers (A5)		X Depleted Ma)		(MLRA 136, 147)
	ick (A10) (LRR N)		Redox Dark		- 6)		Very Shallow Dark Surface (TF12)
Depleted	Below Dark Surfac	e (A11)	Depleted Da	rk Surface	(F7)		Other (Explain in Remarks)
	ark Surface (A12)		Redox Depre				
	lucky Mineral (S1) (I	LRR N,	Iron-Mangan		es (F12) (LRR N,	
	147, 148)		MLRA 13			>	3
	Sleyed Matrix (S4)		Umbric Surfa				³ Indicators of hydrophytic vegetation and
	edox (S5)		Piedmont Flo				
	Matrix (S6) _ayer (if observed)		Red Parent N	viateriai (F	(WLR	A 127, 147	7) unless disturbed or problematic.
	-ayer (ii observeu)	•					
Type:	- L X						Hadda Oall Barranto Van X
Depth (inc	ches):						Hydric Soil Present? Yes X No
Remarks:							

Project/Site: Cumberland	County Property	City/C	County: Cumberlan	nd County	Sampling Date: 4/2/2018
Applicant/Owner: CWV, LLC;			,		Sampling Point: DP-7, UPL
Investigator(s): Hannah L. N		vin Section	on Township Range		
					Slope (%): 2-4%
Subregion (LRR or MLRA): n/a	•				
Soil Map Unit Name: Watered			Long		cation: UPL
Are climatic / hydrologic condition		or this time of year?	/oo X No	(If no, explain in F	
					present? Yes X No
Are Vegetation, Soil					
Are Vegetation, Soil	, or Hydrology	naturally problema	atic? (if needed,	, explain any answe	ers in Remarks.)
SUMMARY OF FINDING	S – Attach site m	nap showing san	npling point locati	ions, transects	s, important features, etc.
Hydrophytic Vegetation Prese	nt? Yes	NoX	lo the Compled Area		
Hydric Soil Present?			Is the Sampled Area within a Wetland?		No <u> </u>
Wetland Hydrology Present?	Yes	No X			<u> </u>
Remarks:		<u> </u>			
Data point was taken a	djacent to flag D-84				
HYDROLOGY					
Wetland Hydrology Indicato	rs:			Secondary Indic	ators (minimum of two required)
Primary Indicators (minimum o	of one is required; checl	k all that apply)		Surface Soi	Cracks (B6)
Surface Water (A1)		True Aquatic Plants ((B14)	Sparsely Ve	egetated Concave Surface (B8)
High Water Table (A2)		Hydrogen Sulfide Od	lor (C1)	Drainage Pa	atterns (B10)
Saturation (A3)		· -	es on Living Roots (C3)	=	
Water Marks (B1)		Presence of Reduced			Water Table (C2)
Sediment Deposits (B2)		Recent Iron Reduction		Crayfish Bu	
Drift Deposits (B3)		Thin Muck Surface (0		-	/isible on Aerial Imagery (C9)
Algal Mat or Crust (B4)		Other (Explain in Rer			Stressed Plants (D1)
Iron Deposits (B5)		` .	,		Position (D2)
Inundation Visible on Aeri	al Imagery (B7)			Shallow Aqu	
Water-Stained Leaves (B9	9)				aphic Relief (D4)
Aquatic Fauna (B13)	,			FAC-Neutra	
Field Observations:					
Surface Water Present?	Yes NoX	Depth (inches):			
Water Table Present?	Yes No _X				
Saturation Present?	Yes No _X			Hydrology Prese	nt? Yes No X
(includes capillary fringe)	10010			Trydrology 1 1ese	165 <u></u> 116 <u></u>
Describe Recorded Data (stre	am gauge, monitoring v	vell, aerial photos, pre	evious inspections), if av	vailable:	
Remarks:	-				

/EGETATION (Five Strata) – Use scientific na	mes of	plants.		Sampling Point: DP-7, UPL
	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 20'x20')	% Cover	Species?	Status	Number of Dominant Species
1. Liriodendron tulipfera	30%	YES	FACU	That Are OBL, FACW, or FAC: 2 (A)
2. Pinus taeda	25%	YES	FAC	Total Number of Densire of
3				Total Number of Dominant Species Across All Strata: 5 (B)
4				Openies / toross / tir etrata.
				Percent of Dominant Species
5	-			That Are OBL, FACW, or FAC: 40% (A/B)
6				Prevalence Index worksheet:
	55%	= Total Cov	er	Total % Cover of: Multiply by:
50% of total cover:27.5	<u>%</u> 20% of	total cover:	11%	
Sapling Stratum (Plot size: 20'x20'				OBL species $0 \times 1 = 0$
1. Juniperus virginiana	20%	YES	FACU	FACW species <u>0</u> x 2 = <u>0</u>
	·	YES		FAC species <u>35</u> x 3 = <u>105</u>
				FACU species <u>65</u> x 4 = <u>260</u>
3		. ———		UPL species 0 x 5 = 0
4				Column Totals: 100 (A) 365 (B)
5				
6				Prevalence Index = B/A = 3.65
	30%	= Total Cov	er	Hydrophytic Vegetation Indicators:
50% of total cover: 15%				1 - Rapid Test for Hydrophytic Vegetation
Shrub Stratum (Plot size: 20'x20')	20 /0 01	total cover.		2 - Dominance Test is >50%
				3 - Prevalence Index is ≤3.0 ¹
1				
2				4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
3				Problematic Hydrophytic Vegetation¹ (Explain)
4				Problematic Hydrophytic Vegetation (Explain)
5				
6				¹ Indicators of hydric soil and wetland hydrology must
		= Total Cov		be present, unless disturbed or problematic.
	·			Definitions of Five Vegetation Strata:
50% of total cover:	20% of	total cover:	<u> </u>	Tree – Woody plants, excluding woody vines,
Herb Stratum (Plot size: 20'x20')				approximately 20 ft (6 m) or more in height and 3 in.
1. Polystichum acrostichoides	15%	YES	FACU	(7.6 cm) or larger in diameter at breast height (DBH).
2				Sapling – Woody plants, excluding woody vines,
3				approximately 20 ft (6 m) or more in height and less
A				than 3 in. (7.6 cm) DBH.
T				Charle Mandy plants avaluating woody vines
5				Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.
6				approximately a to 20 ft (1 to a m) in noight.
7				Herb – All herbaceous (non-woody) plants, including
8				herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3
9				ft (1 m) in height.
10				()
11.				Woody vine – All woody vines, regardless of height.
	·	= Total Cov	or	
50% of total cover: <u>7.5%</u>	20% of	total cover:	3%	
Woody Vine Stratum (Plot size: 20'x20')				
1				
2				
3				
5				Hydrophytic
		= Total Cov	er	Vegetation
50% of total cover:	20% of	total cover:		Present? Yes No_X
Remarks: (Include photo numbers here or on a separate sl				1
A STATE AND A STATE OF THE STAT	/			

Sampling Point: DP-7, UPL

SOIL

Profile Desc	ription: (Describe	to the depth	needed to docum	ent the in	dicator o	or confirm	n the absence of indicators.)
Depth	Matrix		Redox	Features			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture Remarks
0-4	10YR 4/3	100					Sandy Loam_
4-14	10YR 5/4	100					Sandy Loam
14-18	10YR 6/6	100					Sandy Loam
		·					
		·					
		·					
	-						
¹Type: C=Co	oncentration, D=Dep	letion, RM=F	Reduced Matrix, MS	=Masked	Sand Gra	ins.	² Location: PL=Pore Lining, M=Matrix.
Hydric Soil I							Indicators for Problematic Hydric Soils ³ :
Histosol	(A1)		Dark Surface	(S7)			2 cm Muck (A10) (MLRA 147)
	pipedon (A2)		Polyvalue Be				
Black Hi			Thin Dark Su			47, 148)	(MLRA 147, 148)
	n Sulfide (A4)		Loamy Gleye		2)		Piedmont Floodplain Soils (F19)
	Layers (A5)		Depleted Mat		• \		(MLRA 136, 147)
	ick (A10) (LRR N) d Below Dark Surfac	Δ (Δ11)	Redox Dark S Depleted Dar				Very Shallow Dark Surface (TF12) Other (Explain in Remarks)
	ark Surface (A12)	C (ATT)	Redox Depre				Other (Explain in Remarks)
	lucky Mineral (S1) (L	RR N,	Iron-Mangane			.RR N,	
	\ 147, 148)	,	MLRA 136		· , ·	,	
Sandy G	lleyed Matrix (S4)		Umbric Surfa	ce (F13) (N	/ILRA 130	6, 122)	³ Indicators of hydrophytic vegetation and
	edox (S5)		Piedmont Flo				
	Matrix (S6)		Red Parent M	laterial (F2	1) (MLR	127, 147	7) unless disturbed or problematic.
Restrictive L	_ayer (if observed):						
Type:							
Depth (inc	ches):		_				Hydric Soil Present? Yes No _X
Remarks:							

Project/Site: Cumberland	County Property	y Citv/C	county: Cumberlar	nd County	Sampling Date: 4/2/2018
Applicant/Owner: CWV, LLC; o	:/o James H. Martin				Sampling Point: DP-8
Investigator(s): Shannon D		Section	on, Township, Range:		
• ()					Slope (%):0-2%
					Datum:
Soil Map Unit Name: Water			25fig		
Are climatic / hydrologic condit		al for this time of year? V		(If no, explain in F	
Are Vegetation, Soil			hed? Are "Norm		present? Yes X No
Are Vegetation, Soil				, explain any answ	
Are vegetation, 50ii	, or riyurology _	naturally problems	alic: (Il fleeded)	, explain any answe	515 III Nemarks.)
SUMMARY OF FINDIN	GS – Attach site	map showing sam	pling point locat	ions, transects	s, important features, etc.
Hydrophytic Vegetation Pres	ent? Yes X	No	Is the Sampled Area	•	
Hydric Soil Present?	Yes X		within a Wetland?	$_{Yes}$ $ imes$	No
Wetland Hydrology Present?		,			_
Remarks:	<u> </u>				
Data naint was taken					
Data point was taken i	next to flag D-121				
HYDROLOGY					
Wetland Hydrology Indicate	ors:			Secondary Indic	ators (minimum of two required)
Primary Indicators (minimum		neck all that annly)		· ·	l Cracks (B6)
Surface Water (A1)		True Aquatic Plants (D14)	· · · · · · · · · · · · · · · · · · ·	egetated Concave Surface (B8)
Surface Water (A1)X High Water Table (A2)		Hydrogen Sulfide Od		Sparsery ve	
Saturation (A3)		Trydrogen Sunde Od Oxidized Rhizosphere			
Water Marks (B1)		Presence of Reduced	= : :		Water Table (C2)
Sediment Deposits (B2)		Recent Iron Reductio		Crayfish Bu	
Drift Deposits (B3)		Thin Muck Surface (0		-	/isible on Aerial Imagery (C9)
Algal Mat or Crust (B4)		Other (Explain in Rer			Stressed Plants (D1)
Iron Deposits (B5)	-	Outor (Explain in Nor	namoj	X Geomorphic	
Inundation Visible on Ae	rial Imagery (B7)			Shallow Aqu	
X Water-Stained Leaves (E					raphic Relief (D4)
Aquatic Fauna (B13)	20)			FAC-Neutra	
Field Observations:				1710 1104114	1 1001 (20)
Surface Water Present?	Voc. No.	X Depth (inches):			
		Depth (inches): 4"			
Water Table Present?					X X
Saturation Present? (includes capillary fringe)	Yes No	Market Depth (inches):	Wetland	Hydrology Prese	nt? Yes X No
Describe Recorded Data (str	eam gauge, monitorir	ng well, aerial photos, pre	vious inspections), if av	vailable:	
					· ·
Remarks:					

/EGETATION (Five Strata) – Use scientific na	mes of	plants.		Sampling Point: DP-8
201-201	Absolute	Dominant		Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size: 20'x20')		Species?		Number of Dominant Species
1. Carpinus caroliniana	20%	YES	FAC	That Are OBL, FACW, or FAC: 6 (A)
2. Acer rubrum	15%	YES	FAC	Total Number of Dominant
3. Platanus occidentalis	15%	YES	FACW	Species Across All Strata: 6 (B)
4				
5				Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)
6.				That Are OBE, FACW, OF FAC.
<u>. </u>		= Total Cove		Prevalence Index worksheet:
250/				Total % Cover of: Multiply by:
50% of total cover: 25%	20% of	total cover:	10%	OBL species x 1 =
Sapling Stratum (Plot size: 20'x20'				FACW species x 2 =
1. Acer rubrum	20%	YES	FAC	FAC species x 3 =
2. Liquidambar styraciflua	15%	YES	FAC	FACU species x 4 =
3				
4				UPL species x 5 =
5				Column Totals: (A) (B)
6.				Prevalence Index = B/A =
0	35%	= Total Cove		
				Hydrophytic Vegetation Indicators:
50% of total cover: <u>17.5</u>	<u>%</u> 20% of	total cover:	7%	1 - Rapid Test for Hydrophytic Vegetation
Shrub Stratum (Plot size: 20'x20'				✓ 2 - Dominance Test is >50%
1				3 - Prevalence Index is ≤3.0 ¹
2				4 - Morphological Adaptations ¹ (Provide supporting
3				data in Remarks or on a separate sheet)
4				Problematic Hydrophytic Vegetation ¹ (Explain)
5				¹ Indicators of hydric soil and wetland hydrology must
6				be present, unless disturbed or problematic.
		= Total Cove	er	Definitions of Five Vegetation Strata:
50% of total cover:	20% of	total cover:		Tree – Woody plants, excluding woody vines,
Herb Stratum (Plot size: 20'x20')				approximately 20 ft (6 m) or more in height and 3 in.
1. Juncus effusus	15%	YES	FACW	(7.6 cm) or larger in diameter at breast height (DBH).
2				Sapling – Woody plants, excluding woody vines,
3				approximately 20 ft (6 m) or more in height and less
,				than 3 in. (7.6 cm) DBH.
4				Shrub Woody plants evaluding woody vines
5				Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.
6				
7				Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody
8				plants, except woody vines, less than approximately 3
9				ft (1 m) in height.
10				Mandy vine All woods vince regardless of height
11				Woody vine – All woody vines, regardless of height.
		= Total Cove	er	
50% of total cover: 7.5%				
	20% 01	total cover.		
Woody Vine Stratum (Plot size: 20'x20')				
1				
2				
3				
4				
5.				
<u>. </u>		= Total Cove		Hydrophytic
				Vegetation
50% of total cover:	20% of	total cover:		100
Remarks: (Include photo numbers here or on a separate s	heet.)			

Sampling Point: DP-8

Depth	Matrix	0/	Redo	x Features	e ¹ Loc ²	Teston
(inches)	Color (moist)	<u>%</u>	Color (moist)	<u>%</u> <u>Typ</u>	e ¹ Loc ²	Texture Remarks
0-3	10YR 4/2					Sandy Loam
3-18	10YR 6/1	90	7.5YR 5/8		C PL	Sandy Loam
C C	- D D		Dadward Matrix M	C Markad Can	10	21 continue DI Dona Limina M Matrix
	oncentration, D=De Indicators:	epietion, Rivi	=Reduced Matrix, M	S=Masked Sand	Grains.	² Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soi
Black His Hydroge Stratified 2 cm Mu Depleted Thick Da Sandy M	pipedon (A2) stic (A3) n Sulfide (A4) d Layers (A5) lock (A10) (LRR N) d Below Dark Surfa ark Surface (A12) lucky Mineral (S1)		Thin Dark Su Loamy Gleye X Depleted Ma Redox Dark Depleted Da Redox Depre	elow Surface (S8 urface (S9) (MLF ed Matrix (F2) ttrix (F3) Surface (F6) rk Surface (F7)	RA 147, 148)	2 cm Muck (A10) (MLRA 147) Coast Prairie Redox (A16)
MLRA	A 147, 148)		MLRA 13	6)		
	sleyed Matrix (S4)			ace (F13) (MLR		³ Indicators of hydrophytic vegetation a
	edox (S5)			oodplain Soils (F		
	Matrix (S6) _ayer (if observed)	1/-	Red Parent i	Material (F21) (N	ILRA 127, 14	7) unless disturbed or problematic.
Type:	Layer (II Observed	1).				
Depth (inc	shee).					Hydric Soil Present? Yes X No
emarks:						Tryune contresent: Tes No

SOIL

Project/Site: Cumberland County	/ Property	City/County:	Cumberlar	nd County	Sampling Date: 4/2/2018
Applicant/Owner: CWV, LLC; c/o Jam	es H. Martin			State: VA	Sampling Point: DP-8, UPL
Investigator(s): Shannon D. Hill		Section, Towns	ship, Range:	Tax Map #44-A	
Landform (hillslope, terrace, etc.): Hills	lope	Local relief (conca	ive, convex, n	one):	Slope (%): 1-3%
Subregion (LRR or MLRA): n/a					
Soil Map Unit Name: Wateree sandy					cation: UPL
Are climatic / hydrologic conditions on the		ne of year? Yes X	No	 (If no, explain in F	
Are Vegetation, Soil, or I					present? Yes X No
Are Vegetation, Soil, or I				, explain any answe	
,	, a a a g, <u></u> and	,,,	(, . , ,	,
SUMMARY OF FINDINGS - A	ttach site map sho	owing sampling p	ooint locat	ions, transects	s, important features, etc.
Lhydrophytic Vagetation Procent?	Yes No_>	_			
Hydrio Soil Broomt?	Yes No_2		ampled Area Wetland?	Vos	No <u>X</u>
Hydric Soil Present? Wetland Hydrology Present?	Yes No _>	× within s	a wellanu:	163	
Remarks:	163100_/				
Data point was taken adjacent	to flag D-121.				
HYDROLOGY					
Wetland Hydrology Indicators:					ators (minimum of two required)
Primary Indicators (minimum of one is	-			Surface Soil	
Surface Water (A1)		uatic Plants (B14)			getated Concave Surface (B8)
High Water Table (A2)		en Sulfide Odor (C1)		Drainage Pa	
Saturation (A3)		d Rhizospheres on Livi			
Water Marks (B1)		ce of Reduced Iron (C4			Water Table (C2)
Sediment Deposits (B2)		Iron Reduction in Tilled	d Soils (C6)	Crayfish Bur	
Drift Deposits (B3)		ick Surface (C7)			isible on Aerial Imagery (C9)
Algal Mat or Crust (B4)	Other (E	Explain in Remarks)			Stressed Plants (D1)
Iron Deposits (B5)					Position (D2)
Inundation Visible on Aerial Image	ry (B7)			Shallow Aqu	
Water-Stained Leaves (B9)					aphic Relief (D4)
Aquatic Fauna (B13)				FAC-Neutra	Test (D5)
Field Observations:	· · · · · ·				
	No X Depth (
	No X_ Depth (
Saturation Present? Yes	No X Depth ((inches):	Wetland	Hydrology Presei	nt? Yes No X
(includes capillary fringe) Describe Recorded Data (stream gauge	e, monitoring well, aeria	al photos, previous ins	pections), if av	vailable:	
, , ,	, , , , , , , , , , , , , , , , , , , ,	, ,,	,,		
Remarks:					

/EGETATION (Five Strata) – Use scientific na	mes of	plants.		Sampling Point: DP-8, UPL
001-001	Absolute	Dominant		Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size: 20'x20'		Species?		Number of Dominant Species
1. Liriodendron tulipfera	30%	YES	FACU	That Are OBL, FACW, or FAC: 1 (A)
2. Pinus taeda	30%	YES	FAC	Total Number of Dominant
3				Species Across All Strata: 4 (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 25% (A/B)
6				
	60%	= Total Cove	er	Prevalence Index worksheet:
50% of total cover: _ 30%	20% of	total cover:	12%	Total % Cover of: Multiply by:
Sapling Stratum (Plot size: 20'x20'	<u></u>	-		OBL species $0 \times 1 = 0$
1. Fagus grandifolia	20%	YES	FACU	FACW species 0 x 2 = 0
2				FAC species 30 x 3 = 90
3				FACU species x 4 = 280
4				UPL species 0 x 5 = 0
5				Column Totals: <u>100</u> (A) <u>370</u> (B)
6.				Prevalence Index = B/A = 3.70
0	20%	= Total Cove		Hydrophytic Vegetation Indicators:
400/				
50% of total cover: 10%	20% of	total cover:	4%	1 - Rapid Test for Hydrophytic Vegetation
Shrub Stratum (Plot size: 20'x20')				2 - Dominance Test is >50%
1				3 - Prevalence Index is ≤3.0¹
2				4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
3				Problematic Hydrophytic Vegetation¹ (Explain)
4				1 Toblematic Hydrophytic Vegetation (Explain)
5				¹ Indicators of hydric soil and watland hydrology must
6				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
		= Total Cove	er	Definitions of Five Vegetation Strata:
50% of total cover:	20% of	total cover:		
Herb Stratum (Plot size: 20'x20')		-		Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in.
1. Polystichum acrostichoides	20%	YES	FACU	(7.6 cm) or larger in diameter at breast height (DBH).
2				Continue Washington and discount discount
3				Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less
				than 3 in. (7.6 cm) DBH.
4				Shrub – Woody plants, excluding woody vines,
5				approximately 3 to 20 ft (1 to 6 m) in height.
6				
7				Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody
8				plants, except woody vines, less than approximately 3
9				ft (1 m) in height.
10				Woody vine – All woody vines, regardless of height.
11				, , ,
	20%	= Total Cove	er	
50% of total cover: 10%	20% of	total cover:	4%	
Woody Vine Stratum (Plot size: 20'x20')				
1				
2				
3				
4.				
5				
		= Total Cove		Hydrophytic Vegetation
F00/ -{\cdot\cdot\cdot\cdot\cdot\cdot\cdot\cdot				Present? Yes No X
50% of total cover:		iotal cover:		
Remarks: (Include photo numbers here or on a separate sl	neet.)			

Sampling Point: DP-8, UPL

SOIL

(!	Matrix	%	Redox Features	1 Loc ²	T		D	_
(inches) 0-6	Color (moist)	100	Color (moist) % Type	LOC	Texture		Remark	S
	10YR 4/3				Sandy Lo	<u> </u>		
6-14	10YR 6/4	100			Sandy Loa	<u> </u>		
14-18	10YR 6/6	100			Sandy Loa	<u> </u>		
	-				-			
	-							
	-							
vpe: C=Cc	oncentration, D=De	pletion, RM=	Reduced Matrix, MS=Masked Sand	Grains.	² Location:	PL=Pore Lin	ing, M=Matri	ix.
	ndicators:	,						Hydric Soils ³ :
_ Histosol	(A1)		Dark Surface (S7)			2 cm Muck (A10) (MLR<i>A</i>	\ 147)
_ Histic Ep	pipedon (A2)		Polyvalue Below Surface (S8)		148)	Coast Prairie	e Redox (A1	6)
_ Black His			Thin Dark Surface (S9) (MLR	A 147, 148)		(MLRA 14		
	n Sulfide (A4)		Loamy Gleyed Matrix (F2)		_	Piedmont FI		ils (F19)
	l Layers (A5) ick (A10) (LRR N)		Depleted Matrix (F3) Redox Dark Surface (F6)			(MLRA 13 Very Shallov		oo (TE12)
	d Below Dark Surfac	ce (A11)	Depleted Dark Surface (F7)		_	Other (Expla		, ,
	ark Surface (A12)	55 (7111)	Redox Depressions (F8)			_ 011101 (2,1010	an in reoma	1.0)
	lucky Mineral (S1) (LRR N,	Iron-Manganese Masses (F12) (LRR N,				
MLRA	A 147, 148)		MLRA 136)					
-	lleyed Matrix (S4)		Umbric Surface (F13) (MLRA			Indicators of h		-
-	edox (S5)		Piedmont Floodplain Soils (F1			wetland hydro		
	Matrix (S6)		Red Parent Material (F21) (MI	_RA 127, 147	7)	unless disturb	ed or proble	ematic.
	//C - L //							
	_ayer (if observed)):						
Type:):					.,	🗴
Type:):	<u> </u>		Hydric S	ioil Present?	Yes	No <u>×</u>
Type:):	<u></u>		Hydric S	ioil Present?	Yes	No_X
Type:):	<u> </u>		Hydric S	Soil Present?	Yes	No <u>×</u>
Type:):	<u></u>		Hydric S	Soil Present?	Yes	No <u>×</u>
Type:):			Hydric S	Soil Present?	Yes	No_ <u>×</u>
Type:):			Hydric S	Soil Present?	Yes	No ×
Type:):	<u> </u>		Hydric S	Soil Present?	Yes	No X
Type: Depth (inc):			Hydric S	Soil Present?	Yes	No_ <u></u> X
Type: Depth (inc):			Hydric S	Soil Present?	Yes	No X
Type: Depth (inc					Hydric S	Soil Present?	Yes	No X
Type:					Hydric S	Soil Present?	Yes	No X
Type:					Hydric S	Soil Present?	Yes	No X
Type:					Hydric S	Soil Present?	Yes	No X
Type:					Hydric S	Soil Present?	Yes	No X
Type: Depth (inc					Hydric S	Soil Present?	Yes	No X
Type:					Hydric S	Soil Present?	Yes	No X
Туре:					Hydric S	Soil Present?	Yes	No X
Type:					Hydric S	Soil Present?	Yes	No X
Type:					Hydric S	Soil Present?	Yes	No X
Type:					Hydric S	Soil Present?	Yes	No X
Type:					Hydric S	Soil Present?	Yes	No X
Type:					Hydric S	Soil Present?	Yes	No X

Project/Site: Cumberland	County Property	City/County: Cumberla	nd County	Sampling Date: 4/5/2018
Applicant/Owner: CWV, LLC; of	c/o James H. Martin			Sampling Point: DP-9
Investigator(s): Shannon D). Hill	_ Section, Township, Range:	Tax Map #	camping round
	tc.): Floodplain I	ocal relief (concave, convex a	none):	Slone (%): 2-4%
	h/a Lat: 37.5700			Slope (%) 1 + + +
Soil Map Unit Name: Poinde		Long:	NWI classific	
		Y		
•	tions on the site typical for this time of			
	, or Hydrology significan			present? Yes X No
Are Vegetation, Soil	, or Hydrology naturally	oroblematic? (If needed	d, explain any answe	ers in Remarks.)
SUMMARY OF FINDIN	GS – Attach site map showir	ng sampling point loca	tions, transects	s, important features, etc.
Hydrophytic Vegetation Pres	ent? Yes X No	Is the Sampled Are	•	
Hydric Soil Present?	Yes X No	io ino oampioa / ii o	Yes X	No
Wetland Hydrology Present?				
Remarks:				
				ļ
Data point was taken i	next to flag E-389.			
HYDROLOGY				
			On an all and ladies	- ((
Wetland Hydrology Indicate				ators (minimum of two required)
	of one is required; check all that apply		_ Surface Soil	, ,
Surface Water (A1)	True Aquatic			getated Concave Surface (B8)
X High Water Table (A2)		ılfide Odor (C1)	X Drainage Pa	
X Saturation (A3)		zospheres on Living Roots (C3		
Water Marks (B1)		Reduced Iron (C4)		Water Table (C2)
Sediment Deposits (B2)		Reduction in Tilled Soils (C6)	Crayfish Bur	
Drift Deposits (B3)	Thin Muck S			isible on Aerial Imagery (C9)
Algal Mat or Crust (B4)	Other (Expla	in in Remarks)		tressed Plants (D1)
X Iron Deposits (B5)			X Geomorphic	
Inundation Visible on Ae	- · · ·		Shallow Aqu	
X Water-Stained Leaves (E	39)			aphic Relief (D4)
Aquatic Fauna (B13)			FAC-Neutra	Test (D5)
Field Observations:				
Surface Water Present?	Yes No X Depth (inch			
Water Table Present?	Yes X No Depth (inche			
Saturation Present? (includes capillary fringe)	Yes No X Depth (inche	es): Wetland	d Hydrology Presei	nt? Yes <u>X</u> No
	eam gauge, monitoring well, aerial pho	otos, previous inspections), if a	available:	
·				ļ
Remarks:				

/EGETATION (Five Strata) – Use scientific na	mes of	olants.		Sampling Point: DP-9
<u></u>	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 20'x20')		Species?	Status	Number of Dominant Species _
1. Carpinus caroliniana	25%	YES	FAC	That Are OBL, FACW, or FAC: 5 (A)
2. Betula nigra	25%	YES	FAC	Total Number of Descions
3				Total Number of Dominant Species Across All Strata: 5 (B)
				Operior / toross / till ottata.
4				Percent of Dominant Species That Are OBL_FACW_or FAC: 100% (A/B)
5				That Are OBL, FACW, or FAC: 100% (A/B)
6				Prevalence Index worksheet:
	50%	= Total Cove	er	Total % Cover of: Multiply by:
50% of total cover: <u>25</u> %	20% of	total cover:	10%	
Sapling Stratum (Plot size: 20'x20'				OBL species x 1 =
1. Liquidambar styraciflua	20%	YES	FAC	FACW species x 2 =
2 Acer rubrum	15%	YES	FAC	FAC species x 3 =
2				FACU species x 4 =
3				UPL species x 5 =
4				Column Totals: (A) (B)
5				
6				Prevalence Index = B/A =
	35%	= Total Cove	er	Hydrophytic Vegetation Indicators:
50% of total cover: 17.5				1 - Rapid Test for Hydrophytic Vegetation
	<u>70</u> 20 % 01	total cover.	1 70	2 - Dominance Test is >50%
Shrub Stratum (Plot size: 20'x20')				3 - Prevalence Index is ≤3.0¹
1				
2				4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
3				Problematic Hydrophytic Vegetation¹ (Explain)
4				Floblematic Hydrophytic Vegetation (Explain)
5				1
6				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
<u> </u>		= Total Cove		
				Definitions of Five Vegetation Strata:
50% of total cover:	20% of	total cover:		Tree – Woody plants, excluding woody vines,
Herb Stratum (Plot size: 20'x20')				approximately 20 ft (6 m) or more in height and 3 in.
1. Juncus effusus	15%	YES	FACW	(7.6 cm) or larger in diameter at breast height (DBH).
2				Sapling – Woody plants, excluding woody vines,
3				approximately 20 ft (6 m) or more in height and less
4				than 3 in. (7.6 cm) DBH.
T				Church Mandy plants avaluding woody vines
5				Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.
6				approximately a to 20 it (1 to a iii) iii noight
7				Herb – All herbaceous (non-woody) plants, including
8				herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3
9				ft (1 m) in height.
10				, ,
11				Woody vine – All woody vines, regardless of height.
		= Total Cove		
7.50/				
50% of total cover: 7.5%	20% of	total cover:	3%	
Woody Vine Stratum (Plot size: 20'x20')				
1				
2				
3				
4				
5				Hydrophytic
		= Total Cove	er	Vegetation
50% of total cover:	200/ 64	total cover		Present? Yes X No
		iolai cover.		
Remarks: (Include photo numbers here or on a separate sl	neet.)			

SOIL Sampling Point: DP-9

Profile Desc	ription: (Describe	to the dept	th needed to docun	nent the i	ndicator	or confirm	the absence of indicators.)
Depth	Matrix		Redo	x Features	s		
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture Remarks
0-4	10YR 4/2	100			-		Sandy Loam
4-18	10YR 6/1	90	7.5YR 5/6	10	С	PL	Sandy Loam
					-		
	-						
		·		·	·		
					-		
		· 			-		
1- 0.0							21
Hydric Soil	oncentration, D=Dep	letion, RM=	Reduced Matrix, MS	s=Masked	Sand Gra	ains.	² Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils ³ :
_			D 10 ((07)			•
Histosol			Dark Surface		(CO) / 5/	U D A 447	2 cm Muck (A10) (MLRA 147)
	oipedon (A2)		Polyvalue Be				
Black Hi	en Sulfide (A4)		Thin Dark Su Loamy Gleye			47, 140)	(MLRA 147, 148) Piedmont Floodplain Soils (F19)
	d Layers (A5)		Z Depleted Mat	,	r2)		(MLRA 136, 147)
	ick (A10) (LRR N)		Redox Dark S	. ,	·6)		Very Shallow Dark Surface (TF12)
	d Below Dark Surfac	e (A11)	Depleted Dar	,	,		Other (Explain in Remarks)
	ark Surface (A12)	- (Redox Depre				
	lucky Mineral (S1) (L	.RR N,	Iron-Mangan			LRR N,	
MLRA	\ 147, 148)		MLRA 13	6)			
	Bleyed Matrix (S4)		Umbric Surfa				³ Indicators of hydrophytic vegetation and
	Redox (S5)		Piedmont Flo				
	Matrix (S6)		Red Parent N	/laterial (F	21) (MLR	A 127, 147	y) unless disturbed or problematic.
Restrictive I	Layer (if observed):						
Type:							
Depth (in	ches):		<u> </u>				Hydric Soil Present? Yes X No No
Remarks:							

Project/Site: Cumberland County Property	City/County: Cumberland County Sampling Date: 4/2/2018
Applicant/Owner: CWV, LLC; c/o James H. Martin	State: VA Sampling Point: <u>DP-9, UPL</u>
Investigator(s): Hannah L. Miller, Robert Goodwin	Section, Township, Range: Tax Map #45-A-1
• · · / <u> </u>	ocal relief (concave, convex, none): Slope (%):2-4%
Subregion (LRR or MLRA):	Long: -78.1200 Datum:
Soil Map Unit Name: Poindexter-Wedowee complex	
	NWI classification: UPL
Are climatic / hydrologic conditions on the site typical for this time of	
Are Vegetation, Soil, or Hydrology significant	
Are Vegetation, Soil, or Hydrology naturally p	oroblematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showin	ng sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes NoX	_ Is the Sampled Area
Hydric Soil Present? Yes No X	within a Wetland? Yes NoX
Wetland Hydrology Present? Yes No X	-
Remarks:	
Data point was taken adjacent to flag E-389.	
3	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply	y) Surface Soil Cracks (B6)
Surface Water (A1) True Aquatic	Plants (B14) Sparsely Vegetated Concave Surface (B8)
High Water Table (A2) Hydrogen Su	
	zospheres on Living Roots (C3) Moss Trim Lines (B16)
	Reduced Iron (C4) Dry-Season Water Table (C2)
	Reduction in Tilled Soils (C6) Crayfish Burrows (C8)
Drift Deposits (B3) Thin Muck Su	
Algal Mat or Crust (B4) Other (Explai	
Iron Deposits (B5)	Geomorphic Position (D2)
Inundation Visible on Aerial Imagery (B7)	Shallow Aquitard (D3)
Water-Stained Leaves (B9)	Microtopographic Relief (D4)
Aquatic Fauna (B13)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No X Depth (inche	os):
Water Table Present? Yes No _X Depth (inche	·
Saturation Present? Yes No _X_ Depth (inche	,
(includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial pho	otos, previous inspections), if available:
Remarks:	

/EGETATION (Five Strata) – Use scientific na	mes of p	plants.		Sampling Point: DP-9, UPL
201/201	Absolute	Dominant		Dominance Test worksheet:
Tree Stratum (Plot size: 20'x20')		Species?		Number of Dominant Species
1. Liriodendron tulipfera	40%	YES	FACU	That Are OBL, FACW, or FAC: 1 (A)
2. Pinus taeda	10%	YES	FAC	Total Number of Dominant
3				Species Across All Strata: 5 (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 20% (A/B)
6				
	50%	= Total Cove	er	Prevalence Index worksheet:
50% of total cover:25%	20% of	total cover:	10%	Total % Cover of: Multiply by:
Sapling Stratum (Plot size: 20'x20')	2070 01	total cover.		OBL species 0 x 1 = 0
4. Farmer and PfaRa	20%	YES	FACU	FACW species <u>0</u> x 2 = <u>0</u>
				FAC species 10 x 3 = 30
2. Juniperus virginiana				FACU species 90 x 4 = 360
3				UPL species 0 x 5 = 0
4				Column Totals: 100 (A) 390 (B)
5				
6				Prevalence Index = B/A = 3.90
	40%	= Total Cove	er	Hydrophytic Vegetation Indicators:
50% of total cover:20%	20% of	total cover:	8%	1 - Rapid Test for Hydrophytic Vegetation
Shrub Stratum (Plot size: 20'x20')	2070 01	total cover.		2 - Dominance Test is >50%
				3 - Prevalence Index is ≤3.0 ¹
1				4 - Morphological Adaptations ¹ (Provide supporting
2				data in Remarks or on a separate sheet)
3				Problematic Hydrophytic Vegetation ¹ (Explain)
4				
5				¹ Indicators of hydric soil and wetland hydrology must
6				be present, unless disturbed or problematic.
	:	= Total Cove	er	Definitions of Five Vegetation Strata:
50% of total cover:	20% of	total cover:		
Herb Stratum (Plot size: 20'x20')				Tree – Woody plants, excluding woody vines,
Polystichum acrostichoides	10%	YES	EACH	approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).
•			1700	
2				Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less
3				than 3 in. (7.6 cm) DBH.
4				
5				Shrub – Woody plants, excluding woody vines,
6				approximately 3 to 20 ft (1 to 6 m) in height.
7				Herb - All herbaceous (non-woody) plants, including
8				herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3
9				ft (1 m) in height.
10				
11				Woody vine – All woody vines, regardless of height.
		= Total Cove	er	
500/ //				
50% of total cover: <u>5%</u>	20% of	total cover:	2%	
Woody Vine Stratum (Plot size: 20'x20')				
1				
2				
3				
4				
5				Understudie
		= Total Cove		Hydrophytic Vegetation
E00/ -11-1-1				Present? Yes No X
50% of total cover:		iotal cover:		
Remarks: (Include photo numbers here or on a separate sh	neet.)			

Sampling Point: DP-9, UPL

Depth	Matrix		Redox Features	2 Parada
(inches)	Color (moist)	<u>%</u>	Color (moist) % Type ¹ Loc	
0-6	10YR 4/3	100		Sandy Loam_
6-18	10YR 6/4	100		Sandy Loam
	-			
		pletion, RM=R	Reduced Matrix, MS=Masked Sand Grains.	² Location: PL=Pore Lining, M=Matrix.
/dric Soil	Indicators:			Indicators for Problematic Hydric Soils ³ :
_ Histosol			Dark Surface (S7)	2 cm Muck (A10) (MLRA 147)
	pipedon (A2)		Polyvalue Below Surface (S8) (MLRA	
	stic (A3)		Thin Dark Surface (S9) (MLRA 147, 14	
	en Sulfide (A4) d Layers (A5)		Loamy Gleyed Matrix (F2)	Piedmont Floodplain Soils (F19)
	a Layers (A5) ack (A10) (LRR N)		Depleted Matrix (F3)Redox Dark Surface (F6)	(MLRA 136, 147) Very Shallow Dark Surface (TF12)
	d Below Dark Surfa	ice (A11)	Nedox Dark Surface (10) Depleted Dark Surface (F7)	Other (Explain in Remarks)
	ark Surface (A12)	(,)	Redox Depressions (F8)	
	Mucky Mineral (S1)	(LRR N,	Iron-Manganese Masses (F12) (LRR N	N,
	A 147, 148)		MLRA 136)	
_ Sandy G	Bleyed Matrix (S4)		Umbric Surface (F13) (MLRA 136, 122	³ Indicators of hydrophytic vegetation and
	Redox (S5)		Piedmont Floodplain Soils (F19) (MLR	
	Matrix (S6)		Red Parent Material (F21) (MLRA 127	unless disturbed or problematic.
estrictive	Layer (if observed	l):		
Type:			<u> </u>	
Depth (in	ches):		_	Hydric Soil Present? Yes No _X
emarks:				•

Project/Site: Cumberland	Count	y Pro	perty	C	itv/Countv:	Cumberlar	nd County	_ Sampling Date: _	4/9/2018
Applicant/Owner: CWV, LLC; o					J . .		State: VA	Sampling Point	
Investigator(s): Hannah L.				S	Section, Tov	nship Range:	Tax Map # 45-		
Landform (hillslope, terrace, et		odplai	n	Loca	al relief (con	cave convex n	one).	Slon	e (%)· 1-3%
Subregion (LRR or MLRA): _n								Datum	
Soil Map Unit Name: Chewa	cla and l	Mono	Lai. can soils	/Poindexter Wed	dowee con		NWI classific		·•
						,			
Are climatic / hydrologic condit									ć
Are Vegetation, Soil								present? Yes X	No
Are Vegetation, Soil	, or	Hydro	ology	naturally prob	lematic?	(If needed	, explain any answe	ers in Remarks.)	
SUMMARY OF FINDIN	GS – A	ttacl	h site m	nap showing s	sampling	point locat	ions, transects	s, important fe	atures, etc.
Hydrophytic Vegetation Pres	ent?	Y	es X	No	le the	Sampled Area			
Hydric Soil Present?			es X	No		n a Wetland?	$_{Yes}$ $ imes$	No	
Wetland Hydrology Present?				No				_	
Remarks:					l				
Data point was taken i	nevt to f	flan F	-184						
Data point was taken i	ICAL IO I	llay L	10						
HYDROLOGY									
Wetland Hydrology Indicate							Coondan/India	otoro (minimum of t	ave required)
			radi abaa	le all that apply			· ·	ators (minimum of t	wo required)
Primary Indicators (minimum	of one is	s requi			. (5.11)		Surface Soil		(5.5)
X Surface Water (A1)				True Aquatic Pla				getated Concave S	urface (B8)
X High Water Table (A2)				Hydrogen Sulfide			X Drainage Pa		
X Saturation (A3)				Oxidized Rhizosp		-			
X Water Marks (B1)				Presence of Red				Water Table (C2)	
Sediment Deposits (B2)				Recent Iron Red		ed Soils (C6)	Crayfish Bur		
Drift Deposits (B3)				Thin Muck Surface				isible on Aerial Ima	
Algal Mat or Crust (B4)				Other (Explain in	Remarks)			Stressed Plants (D1)
Iron Deposits (B5)							X Geomorphic	` '	
Inundation Visible on Ae		ery (B	7)				Shallow Aqu		
X Water-Stained Leaves (E	39)							aphic Relief (D4)	
Aquatic Fauna (B13)							FAC-Neutra	l Test (D5)	
Field Observations:									
Surface Water Present?				Depth (inches):					
Water Table Present?	Yes _	X	No	Depth (inches):	6"				
Saturation Present?	Yes _	X	No	Depth (inches):	2"	Wetland	Hydrology Prese	nt? Yes X	No
(includes capillary fringe)							9-61-		
Describe Recorded Data (str	eam gau	ge, mo	onitoring v	weii, aeriai pnotos	, previous ii	nspections), if a	valiable:		
Remarks:									

/EGETATION (Five Strata) – Use scientific na	ames of _l	olants.		Sampling Point: DP-10
201.001	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 20'x20')		Species?		Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)
1				That Are OBE, I AGW, OFF AG.
				Total Number of Dominant Species Across All Strata: 3 (B)
				Species Across All Strata: (B)
4				Percent of Dominant Species That Are OBL FACW, or FAC: 100% (A/B)
5		·		That Are OBL, FACW, or FAC: 100% (A/B)
6				Prevalence Index worksheet:
		= Total Cov		Total % Cover of: Multiply by:
50% of total cover:	20% of	total cover:		OBL species x 1 =
Sapling Stratum (Plot size: 20'x20')	5 0/	VE0	E4.0\4/	FACW species x 2 =
1. Betula nigra	5%	YES	FACW	FAC species x 3 =
2. Lindera benzoin	5%	YES	FAC	FACU species x 4 =
3				UPL species x 5 =
4				Column Totals: (A) (B)
5				(2)
6				Prevalence Index = B/A =
	10%	= Total Cov	er	Hydrophytic Vegetation Indicators:
50% of total cover: 5%				1 - Rapid Test for Hydrophytic Vegetation
Shrub Stratum (Plot size: 20'x20')	2070 01	total covor.		2 - Dominance Test is >50%
_				3 - Prevalence Index is ≤3.0 ¹
* 				4 - Morphological Adaptations ¹ (Provide supporting
2				data in Remarks or on a separate sheet)
3				Problematic Hydrophytic Vegetation ¹ (Explain)
4				
5				¹ Indicators of hydric soil and wetland hydrology must
6				be present, unless disturbed or problematic.
		= Total Cov	er	Definitions of Five Vegetation Strata:
50% of total cover:	20% of	total cover:		Tree – Woody plants, excluding woody vines,
Herb Stratum (Plot size: 20'x20')				approximately 20 ft (6 m) or more in height and 3 in.
1. Juncus effusus	90%	YES	FACW	(7.6 cm) or larger in diameter at breast height (DBH).
2				Sapling – Woody plants, excluding woody vines,
3				approximately 20 ft (6 m) or more in height and less
4				than 3 in. (7.6 cm) DBH.
5				Shrub – Woody plants, excluding woody vines,
6				approximately 3 to 20 ft (1 to 6 m) in height.
7				Herb – All herbaceous (non-woody) plants, including
8				herbaceous vines, regardless of size, and woody
9				plants, except woody vines, less than approximately 3
10				ft (1 m) in height.
				Woody vine – All woody vines, regardless of height.
11	90%	= Total Cov		
45				
50% of total cover: 45	<u>%</u> 20% of	total cover:	18%	
Woody Vine Stratum (Plot size: 20'x20')				
1				
2				
3				
4				
5				Hydrophytic
		= Total Cov	er	Hydrophytic Vegetation
50% of total cover:	20% of	total cover		Present? Yes X No
		ioiai covel.		
Remarks: (Include photo numbers here or on a separate s	,			
Large, broad low lying area next to a toe of	slope fea	ature resu	ulting in a	a saturated floodplain.

SOIL Sampling Point: DP-10

Profile Desc	ription: (Describe	to the dep	th needed to docun	nent the i	ndicator	or confirm	n the absence of indicators.)
Depth	Matrix		Redo	x Feature:	S		
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture Remarks
0-5	10YR 4/2	100					Sandy Loam
5-18	10YR 7/1	85	7.5YR 6/6	15	С	PL	Sandy Loam
	-						
	-						
				-			
	-						
	-						
1Typo: C-C	oncentration, D=Dep	lotion PM-	-Poducod Matrix MS	S-Mackad	I Sand Gr	nine	² Location: PL=Pore Lining, M=Matrix.
Hydric Soil		ielion, Rivi=	Reduced Matrix, Mc	s=iviasked	Sand Gra	airis.	Indicators for Problematic Hydric Soils ³ :
-			Dork Surface	(87)			
Histosol	pipedon (A2)		Dark Surface Polyvalue Be		ca (SR) (N	II DA 147	2 cm Muck (A10) (MLRA 147) 148) Coast Prairie Redox (A16)
Black Hi			Thin Dark Su				(MLRA 147, 148)
	en Sulfide (A4)		Loamy Gleye			41, 140)	Piedmont Floodplain Soils (F19)
	d Layers (A5)		X Depleted Mat	,	/		(MLRA 136, 147)
	ick (A10) (LRR N)		Redox Dark S	. ,	⁻ 6)		Very Shallow Dark Surface (TF12)
Depleted	d Below Dark Surface	e (A11)	Depleted Dar	k Surface	(F7)		Other (Explain in Remarks)
Thick Da	ark Surface (A12)		Redox Depre				
	lucky Mineral (S1) (L	.RR N,	Iron-Mangan		es (F12) (LRR N,	
	A 147, 148)		MLRA 13				2
	Gleyed Matrix (S4)		Umbric Surfa				³ Indicators of hydrophytic vegetation and
	Redox (S5)		Piedmont Flo				
	Matrix (S6)		Red Parent N	/laterial (F	21) (MLR	A 127, 147	7) unless disturbed or problematic.
	Layer (if observed):						
Type:							· · · · · · · · · · · · · · · · · · ·
	ches):						Hydric Soil Present? Yes X No No
Remarks:							

Project/Site: Cumberland Cou	nty Property	City/County:	Cumberland	d County g	Sampling Date: 4/9/2018
Applicant/Owner: CWV, LLC; c/o J		, ,			_ Sampling Point: <u>DP-10, UPL</u>
Investigator(s): Shannon D. Hill,		Section, Towns	ship. Range:	Tax Map #45-A-1	<u>-</u>
Landform (hillslope, terrace, etc.): <u>I</u>					
Subregion (LRR or MLRA): n/a					Datum:
Soil Map Unit Name: Poindexter V				NWI classificat	
Are climatic / hydrologic conditions o		e of year? Yes X	No ((If no, explain in Rei	
Are Vegetation, Soil,					esent? Yes X No
Are Vegetation, Soil,				explain any answers	
	, , , , , , , , , , , , , , , , , , , ,	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	(, ,	,
SUMMARY OF FINDINGS -	Attach site map sho	wing sampling p	point location	ons, transects,	important features, etc.
Hydrophytic Vegetation Present?	Yes No_X				
Hydric Soil Present?	Yes No_X		Sampled Area a Wetland?	Yes	No
Wetland Hydrology Present?	Yes No X				<u> </u>
Remarks:					
	5 - 101				
Data point was taken adjac	ent to flag E-184.				
HYDROLOGY					
Wetland Hydrology Indicators:				Secondary Indicato	ors (minimum of two required)
Primary Indicators (minimum of one	e is required: check all that a	(vlage		Surface Soil C	
Surface Water (A1)	-	uatic Plants (B14)			etated Concave Surface (B8)
High Water Table (A2)		n Sulfide Odor (C1)		Drainage Patte	
Saturation (A3)	· -	Rhizospheres on Livi	ing Roots (C3)	Moss Trim Line	
Water Marks (B1)		e of Reduced Iron (C4			/ater Table (C2)
Sediment Deposits (B2)		ron Reduction in Tilled		Crayfish Burro	
Drift Deposits (B3)		ck Surface (C7)			ible on Aerial Imagery (C9)
Algal Mat or Crust (B4)	Other (E:	xplain in Remarks)		Stunted or Stre	essed Plants (D1)
Iron Deposits (B5)				Geomorphic P	osition (D2)
Inundation Visible on Aerial Im	agery (B7)			Shallow Aquita	ard (D3)
Water-Stained Leaves (B9)				Microtopograp	hic Relief (D4)
Aquatic Fauna (B13)				FAC-Neutral T	est (D5)
Field Observations:					
	s No X Depth (i				
	s No X_ Depth (i				
Saturation Present? Yes	s No X_ Depth (i	inches):	Wetland H	lydrology Present	? Yes No <u>X</u>
(includes capillary fringe) Describe Recorded Data (stream g	auge, monitoring well, aeria	l photos, previous ins	pections), if ava	ilable:	
December Necestada Data (etream g	adgo, mormornig won, dona	ii priotoo, proviodo iiio	poonono), n ava	mabio.	
Remarks:					
Kemana.					

/EGETATION (Five Strata) – Use scientific na	mes of _l	plants.		Sampling Point: DP-10, UPL
	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 20'x20')	% Cover	Species?	Status	Number of Dominant Species
1. Liriodendron tulipfera	20%	YES	FACU	That Are OBL, FACW, or FAC: 2 (A)
2. Fagus grandifolia	30%	YES	FACU	Total Number of Dominant
3				Species Across All Strata: 5 (B)
4				
5				Percent of Dominant Species That Are OBL, FACW, or FAC: 40% (A/B)
6.				That Are OBE, I AGW, OF I AG.
<u> </u>	50%	= Total Cov		Prevalence Index worksheet:
25%				Total % Cover of: Multiply by:
50% of total cover: 25%	20% of	total cover:	10 /0	OBL species 0 x 1 = 0
Sapling Stratum (Plot size: 20'x20'				FACW species <u>0</u> x 2 = <u>0</u>
-	20%	YES	FAC	FAC species 30 x 3 = 90
2				FACU species 70 x 4 = 280
3				UPL species 0 x 5 = 0
4				Column Totals: 100 (A) 370 (B)
5				Column Totals. (A)
6				Prevalence Index = B/A = 3.70
	20%	= Total Cov	er	Hydrophytic Vegetation Indicators:
50% of total cover: 10%				1 - Rapid Test for Hydrophytic Vegetation
Shrub Stratum (Plot size: 20'x20')	20 /6 01	iolai covei.	.,,,	2 - Dominance Test is >50%
				3 - Prevalence Index is ≤3.0 ¹
1				4 - Morphological Adaptations ¹ (Provide supporting
2				data in Remarks or on a separate sheet)
3				Problematic Hydrophytic Vegetation ¹ (Explain)
4				
5				¹ Indicators of hydric soil and wetland hydrology must
6				be present, unless disturbed or problematic.
	:	= Total Cov	er	Definitions of Five Vegetation Strata:
50% of total cover:	20% of	total cover:		
Herb Stratum (Plot size: 20'x20')				Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in.
Polystichum acrostichoides	20%	YES	FACU	(7.6 cm) or larger in diameter at breast height (DBH).
			1700	
0				Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less
3				than 3 in. (7.6 cm) DBH.
4				, ,
5				Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.
6				approximately 3 to 20 ft (1 to 6 fil) in neight.
7				Herb – All herbaceous (non-woody) plants, including
8				herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3
9				ft (1 m) in height.
10				Mandania Allumadu in a mandania (haish)
11				Woody vine – All woody vines, regardless of height.
	20%	= Total Cov	er	
50% of total cover: 10%				
Woody Vine Stratum (Plot size: 20'x20')	20 /6 01	total cover.	-1 /0	
1. Smilax rotundifolia	10%	YES	FAC	
2				
3				
4				
5				Hydrophytic
	10%	= Total Cov	er	Vegetation
50% of total cover: 5%	20% of	total cover:	2%	Present? Yes No_X
Remarks: (Include photo numbers here or on a separate si				
Tromano. (morado prioto numboro nere or on a separate si				

Sampling Point: DP-10, UPL

	Matrix		Redox Features	
(inches)	Color (moist)	%	Color (moist) % Type ¹ Lo	c ² <u>Texture</u> <u>Remarks</u>
0-4	10YR 5/3	100		Sandy Loam_
4-18	10YR 5/4	100		Sandy Loam
				
				
				<u> </u>
	-			
Type: C=C(oncentration D=De	nletion RM-R	educed Matrix, MS=Masked Sand Grains.	² Location: PL=Pore Lining, M=Matrix.
lydric Soil I		piction, rawi–ra	Caucca Matrix, MO-Masked Saria Grains.	Indicators for Problematic Hydric Soils ³ :
Histosol			Dark Surface (S7)	2 cm Muck (A10) (MLRA 147)
	oipedon (A2)		Polyvalue Below Surface (S8) (MLRA	
Black Hi			Thin Dark Surface (S9) (MLRA 147, 1	
	n Sulfide (A4)		Loamy Gleyed Matrix (F2)	Piedmont Floodplain Soils (F19)
	d Layers (A5)		Depleted Matrix (F3)	(MLRA 136, 147)
	ick (A10) (LRR N)		Redox Dark Surface (F6)	Very Shallow Dark Surface (TF12)
	d Below Dark Surfa	ce (A11)	Depleted Dark Surface (F7)	Other (Explain in Remarks)
Thick Da	ark Surface (A12)		Redox Depressions (F8)	
Sandy M	Mucky Mineral (S1)	(LRR N,	Iron-Manganese Masses (F12) (LRR	N,
	A 147, 148)		MLRA 136)	
Sandy G	Sleyed Matrix (S4)		Umbric Surface (F13) (MLRA 136, 12	2) ³ Indicators of hydrophytic vegetation and
Sandy R	Redox (S5)		Piedmont Floodplain Soils (F19) (MLF	RA 148) wetland hydrology must be present,
Stripped	Matrix (S6)		Red Parent Material (F21) (MLRA 12	7, 147) unless disturbed or problematic.
Restrictive I	Layer (if observed):		
Type:			<u></u>	
	choc):			Hydric Soil Present? Yes No X
Depth (ind	Liles)			
Depth (ind				
	ones).			
	ones).			
	olies).			
	ones).			
	olies).			
	olies).			
Depth (ind	olies).			
	olies).			
	olies).			
	illes).			
	olies).			

Project/Site: Cumberland	Coun	ty P	roperty	Citv/C	County: Cu	umberlan	d County	_ Sampling Date:	1/9/2018
Applicant/Owner: CWV, LLC; o	o James	H. Ma	artin					Sampling Point:	
Investigator(s): Hannah L.	Miller			Section Section	on. Townshi	p. Range:			
Landform (hillslope, terrace, et									(%): 0-2%
Subregion (LRR or MLRA): n									
Soil Map Unit Name: Poinde						-	NWI classifi		
Are climatic / hydrologic condit							(If no, explain in I		
Are Vegetation, Soil					rbed?			present? Yes X	No
Are Vegetation, Soil		-		-			explain any answ		NO
Are vegetation, 30ii	, 0	TTIYU	lology	naturally problem	auc:	(II rieeded,	explain any answ	ers in Nemarks.)	
SUMMARY OF FINDIN	GS – /	Attac	ch site	map showing san	npling po	int locati	ons, transect	s, important fea	tures, etc.
Hydrophytic Vegetation Pres	ent?	,	Yes X	No	Is the San	npled Area			
Hydric Soil Present?			Yes X		within a W		$_{Yes}$ $ imes$	No	
Wetland Hydrology Present?		,	Yes X	No					
Remarks:									
Data naint was taken	44-	£1 ~ ~.	F 00						
Data point was taken i	iext to	nag	F-28.						
HYDROLOGY									
Wetland Hydrology Indicate	ors:						Secondary Indic	ators (minimum of tw	o required)
Primary Indicators (minimum		is rea	uired: che	eck all that apply)				l Cracks (B6)	
X Surface Water (A1)	01 0110 1	0 1041		_ True Aquatic Plants ((R14)			egetated Concave Su	ırface (B8)
X High Water Table (A2)				_ Hydrogen Sulfide Od			X Drainage Pa	-	Trace (Bo)
X Saturation (A3)				Oxidized Rhizospher		Roots (C3)	_		
X Water Marks (B1)				Presence of Reduce	_	110013 (00)		Water Table (C2)	
Sediment Deposits (B2)				Recent Iron Reduction		inils (C6)	Crayfish Bu		
Drift Deposits (B3)				Thin Muck Surface (0110 (00)	· ·	/isible on Aerial Imag	iery (C9)
Algal Mat or Crust (B4)				_ Other (Explain in Re				Stressed Plants (D1)	(00)
X Iron Deposits (B5)					,		X Geomorphic		
Inundation Visible on Ae	rial Ima	aerv (B7)				Shallow Aqı	` '	
X Water-Stained Leaves (E		, - · , ·	,					raphic Relief (D4)	
Aquatic Fauna (B13)	, ,						FAC-Neutra		
Field Observations:						1			
Surface Water Present?	Voc	×	No	Depth (inches): _0"	•				
Water Table Present?				Depth (inches): 4"					
				Depth (inches):4		Wetlend	Undrelegy Droop	ent? Yes X	Na
Saturation Present? (includes capillary fringe)	res_		NO	Depth (inches):+		wetiand	nyarology Prese	ent? Yes /_	No
Describe Recorded Data (str	eam gai	uge, n	nonitoring	g well, aerial photos, pre	evious inspec	ctions), if av	ailable:		
Remarks:									

/EGETATION (Five Strata) – Use scientific na	mes of p	olants.		Sampling Point: DP-11
	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 20'x20')	% Cover	Species?		Number of Dominant Species
1. Liquidambar styraciflua	20%	YES	FAC	That Are OBL, FACW, or FAC: 6 (A)
2. Acer rubrum	20%	YES	FAC	
3				Total Number of Dominant Species Across All Strata: 6 (B)
•				Species Across All Strata: 6 (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 100% (A/B)
6				Prevalence Index worksheet:
	40%	= Total Cov	er	
50% of total cover: _ 20%	20% of	total cover:	8%	Total % Cover of: Multiply by:
Sapling Stratum (Plot size: 20'x20')	_			OBL species x 1 =
1. Lindera benzoin	20%	YES	FAC	FACW species x 2 =
2. Ilex opaca	15%	YES	FAC	FAC species x 3 =
<u></u>	10%			FACU species x 4 =
3. Carpinus caroliniana	1076	YES	FAC	UPL species x 5 =
4				Column Totals: (A) (B)
5				(,
6				Prevalence Index = B/A =
	45%	= Total Cov	er	Hydrophytic Vegetation Indicators:
50% of total cover: 22.5				1 - Rapid Test for Hydrophytic Vegetation
	70 20% 01	total cover.	0 70	2 - Dominance Test is >50%
Shrub Stratum (Plot size: 20'x20')				3 - Prevalence Index is ≤3.0¹
1				
2				4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
3				·
4				Problematic Hydrophytic Vegetation ¹ (Explain)
5				
6				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
·		= Total Cov	or	
				Definitions of Five Vegetation Strata:
50% of total cover:	20% of	total cover:		Tree – Woody plants, excluding woody vines,
Herb Stratum (Plot size: 20'x20')				approximately 20 ft (6 m) or more in height and 3 in.
1. Juncus effusus	15%	YES	FACW	(7.6 cm) or larger in diameter at breast height (DBH).
2				Sapling – Woody plants, excluding woody vines,
3.				approximately 20 ft (6 m) or more in height and less
4				than 3 in. (7.6 cm) DBH.
5.			-	Shrub – Woody plants, excluding woody vines,
-				approximately 3 to 20 ft (1 to 6 m) in height.
6				
7				Herb – All herbaceous (non-woody) plants, including
8				herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3
9				ft (1 m) in height.
10				
11				Woody vine – All woody vines, regardless of height.
		= Total Cov		
7 50/				
50% of total cover: 7.5%	20% of	total cover:	370	
Woody Vine Stratum (Plot size: 20'x20')				
1				
2				
3				
4				
5				Hydrophytic
	:	= Total Cov	er	Vegetation
50% of total cover:	20% of	total cover-		Present? Yes X No
Remarks: (Include photo numbers here or on a separate sl				<u> </u>
Tromaino. Imolude prioto fidilibero nere di dii a separate si	1001.)			

Sampling Point: DP-11

Profile Desc	ription: (Describe	to the dep	th needed to docu	ment the i	ndicator	or confirm	the absenc	e of inc	licators.)
Depth	Matrix			x Feature	s				
(inches)	Color (moist)	<u>%</u>	Color (moist)	%	Type ¹	Loc ²	Texture		Remarks
0-4	10YR 3/3	100					Sandy Lo	am	
4-18	10YR 6/1	90	10YR 6/8	10	С	PL	Sandy Loa	.m	
					-				
	-	· ——	-						
					-				
							-	_	
								_	
¹ Type: C=Ce	oncentration, D=Dep	letion. RM	=Reduced Matrix. M	S=Masked	Sand Gr	ains.	² Location:	PL=Por	e Lining, M=Matrix.
Hydric Soil		,	,			-			for Problematic Hydric Soils ³ :
Histosol			Dark Surface	e (S7)					uck (A10) (MLRA 147)
	pipedon (A2)		Polyvalue Be		ce (S8) (N	ILRA 147.			Prairie Redox (A16)
	stic (A3)		Thin Dark S				-,		RA 147, 148)
	en Sulfide (A4)		Loamy Gley			,			ont Floodplain Soils (F19)
	d Layers (A5)		X Depleted Ma		,		_		RA 136, 147)
	ick (A10) (LRR N)		Redox Dark		- 6)				nallow Dark Surface (TF12)
	d Below Dark Surface	e (A11)	Depleted Da						Explain in Remarks)
Thick Da	ark Surface (A12)		Redox Depr						
Sandy M	lucky Mineral (S1) (L	RR N,	Iron-Mangar	ese Mass	es (F12) (LRR N,			
	\ 147, 148)		MLRA 13	36)					
Sandy G	Bleyed Matrix (S4)		Umbric Surfa	ace (F13) ((MLRA 13	6, 122)	³ In	dicators	s of hydrophytic vegetation and
Sandy R	Redox (S5)		Piedmont Fl	oodplain S	oils (F19)	(MLRA 14	1 8) v	etland	hydrology must be present,
Stripped	Matrix (S6)		Red Parent	Material (F	21) (MLR	A 127, 147	7) u	nless d	isturbed or problematic.
Restrictive I	Layer (if observed):								
Type:									
Depth (in	ches):						Hydric So	il Prese	ent? Yes X
Remarks:							.,		
Remarks.									

SOIL

Project/Site: Cumberland	l County Pi	ropert	ty	City/C	county: Cu	mberland	d County	Sampling Date:	4/9/2018
Applicant/Owner: CWV, LLC								Sampling Poin	
Investigator(s): Hannah L.				rin Section	on. Township	. Range:			<u>D1 11, 01 L</u>
Landform (hillslope, terrace, e									ne (%)· 2-4%
Subregion (LRR or MLRA):r									
Soil Map Unit Name: Poinde								•	II
							NWI classific		
Are climatic / hydrologic condi					'es <u> </u>		(If no, explain in R		
Are Vegetation, Soil _								oresent? Yes>	No
Are Vegetation, Soil _	, or Hydi	rology _		naturally problema	atic? ((If needed, e	explain any answe	ers in Remarks.)	
SUMMARY OF FINDIN	GS – Attac	h site	e m	ap showing san	npling poi	nt location	ons, transects	s, important fe	eatures, etc.
Hydrophytic Vegetation Pres	ent?	⁄es		No_X	Is the Sam	nled Area			
Hydric Soil Present?				No X	within a We		Yes	No <u> </u>	_
Wetland Hydrology Present?	,	es		No X					_
Remarks:									
Data point was taken	adjacent to	flag F	-28.						
	-	_							
HYDROLOGY									
Wetland Hydrology Indicat	ors:						Secondary Indica	ators (minimum of	two required)
Primary Indicators (minimum	ı of one is requ	uired; c	heck	all that apply)			Surface Soil	Cracks (B6)	
Surface Water (A1)				True Aquatic Plants (B14)			getated Concave S	Surface (B8)
High Water Table (A2)				Hydrogen Sulfide Od			Drainage Pa		` ,
Saturation (A3)				Oxidized Rhizospher		Roots (C3)	Moss Trim L		
Water Marks (B1)				Presence of Reduced	_	(,		Water Table (C2)	
Sediment Deposits (B2)				Recent Iron Reduction		ils (C6)	Crayfish Bur		
Drift Deposits (B3)				Thin Muck Surface (C		()		isible on Aerial Im	agery (C9)
Algal Mat or Crust (B4)				Other (Explain in Rer				tressed Plants (D1	
Iron Deposits (B5)				(- · · · · · · · · · · · · · · · · · ·	,			Position (D2)	.,
Inundation Visible on Ae	rial Imagery (I	37)					Shallow Aqu		
Water-Stained Leaves (• • •	,						aphic Relief (D4)	
Aquatic Fauna (B13)	50)						FAC-Neutral		
							1710 14041141	1 1001 (20)	
Field Observations:			V	5 4 (1 1)					
Surface Water Present?				Depth (inches):					
Water Table Present?				Depth (inches):					
Saturation Present?	Yes	No	<u>X</u> _	Depth (inches):		Wetland H	Hydrology Preser	nt? Yes	No <u>X</u>
(includes capillary fringe) Describe Recorded Data (str		a a nita ri		vall agrical photograps	u da ua inanaat	tions) if our	ilahla:		
Describe Recorded Data (sti	eam gauge, n	IOTIILOTI	ng w	reii, aeriai priotos, pre	vious inspeci	lions), ii ava	aliable.		
Remarks:									

/EGETATION (Five Strata) – Use scientific na	mes of p	olants.		Sampling Point: DP-11, UPL
201.001	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 20'x20')	% Cover	Species?	Status	Number of Dominant Species
1. Fagus grandifolia	40%	YES	FACU	That Are OBL, FACW, or FAC: 1 (A)
2. Liriodendron tulipfera	20%	YES	FACU	Total Number of Dominant
3				Species Across All Strata: 5 (B)
4				Barrant of Barring of Canada
5				Percent of Dominant Species That Are OBL, FACW, or FAC: 20% (A/B)
6.				
	60%	= Total Cov	er	Prevalence Index worksheet:
50% of total cover: 30%	20% of	total cover:	12%	Total % Cover of: Multiply by:
Sapling Stratum (Plot size: 20'x20')	20 /6 01	total cover.		OBL species 0 x 1 = 0
	10%	VEC	EACH	FACW species <u>0</u> x 2 = <u>0</u>
		YES	FACU	FAC species 10 x 3 = 30
2. Ilex opaca			FAC	FACU species x 4 =280
3				UPL species x 5 = 100
4				Column Totals:
5				
6				Prevalence Index = B/A = 4.10
	20%	= Total Cov	er	Hydrophytic Vegetation Indicators:
50% of total cover:10%	20% of	total cover:	4%	1 - Rapid Test for Hydrophytic Vegetation
Shrub Stratum (Plot size: 20'x20')				2 - Dominance Test is >50%
1				3 - Prevalence Index is ≤3.0 ¹
2				4 - Morphological Adaptations ¹ (Provide supporting
				data in Remarks or on a separate sheet)
3				Problematic Hydrophytic Vegetation ¹ (Explain)
4				
5				¹ Indicators of hydric soil and wetland hydrology must
6				be present, unless disturbed or problematic.
		= Total Cov	er	Definitions of Five Vegetation Strata:
50% of total cover:	20% of	total cover:		Tree – Woody plants, excluding woody vines,
Herb Stratum (Plot size: 20'x20')				approximately 20 ft (6 m) or more in height and 3 in.
Sanguinaria canadensis	20%	YES	UPL	(7.6 cm) or larger in diameter at breast height (DBH).
2				Sapling – Woody plants, excluding woody vines,
3.				approximately 20 ft (6 m) or more in height and less
4				than 3 in. (7.6 cm) DBH.
5				Shrub – Woody plants, excluding woody vines,
				approximately 3 to 20 ft (1 to 6 m) in height.
6				
7				Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody
8				plants, except woody vines, less than approximately 3
9				ft (1 m) in height.
10				Woody vine – All woody vines, regardless of height.
11				
	20%	= Total Cov	er	
50% of total cover: 10%	20% of	total cover:	4%	
Woody Vine Stratum (Plot size: 20'x20')				
1				
2				
3				
4				
5		Tatalo		Hydrophytic
		= Total Cov		Vegetation Present? Yes No
50% of total cover:	20% of	total cover:		Present? Yes No
Remarks: (Include photo numbers here or on a separate sl	neet.)			

Sampling Point: DP-11, UPL

	<u>Matrix</u>		Redox Features	De contra
(inches)	Color (moist)	<u>%</u>	Color (moist) % Type ¹ Loc ² Textu	
0-4	10YR 4/3	100	Sandy	Loam
4-10	10YR 5/4	100	Sandy I	_oam
10-18	10YR 6/6	100	Sandy C	. Loam
	-			
	-			
	-			
<u> </u>		<u> </u>		
[vne: C=C(ncentration D-De	nletion RM-R	educed Matrix, MS=Masked Sand Grains. ² Location	on: PL=Pore Lining, M=Matrix.
	Indicators:	epielion, Kivi=K	educed Matrix, MS=Masked Sand Grains.	Indicators for Problematic Hydric Soils ³ :
_ Histosol			Dark Surface (S7)	2 cm Muck (A10) (MLRA 147)
	pipedon (A2)		Polyvalue Below Surface (S8) (MLRA 147, 148)	Coast Prairie Redox (A16)
Black Hi			Thin Dark Surface (S9) (MLRA 147, 148)	(MLRA 147, 148)
	n Sulfide (A4)		Loamy Gleyed Matrix (F2)	Piedmont Floodplain Soils (F19)
	d Layers (A5)		Depleted Matrix (F3)	(MLRA 136, 147)
	ick (A10) (LRR N)	200 (111)	Redox Dark Surface (F6) Depleted Dark Surface (F7)	Very Shallow Dark Surface (TF12)Other (Explain in Remarks)
	d Below Dark Surfa ark Surface (A12)	ace (ATT)	Redox Depressions (F8)	Other (Explain in Remarks)
	fucky Mineral (S1)	(LRR N,	Iron-Manganese Masses (F12) (LRR N,	
	A 147, 148)	,	MLRA 136)	
Sandy G	Bleyed Matrix (S4)		Umbric Surface (F13) (MLRA 136, 122)	³ Indicators of hydrophytic vegetation and
	tedox (S5)		Piedmont Floodplain Soils (F19) (MLRA 148)	wetland hydrology must be present,
	Matrix (S6)		Red Parent Material (F21) (MLRA 127, 147)	unless disturbed or problematic.
	_ayer (if observed	d):		
Type:			_	
			Hydri	c Soil Present? Yes No ×
Depth (inc	ches):			
	ches):			
Depth (inc	ches):			
	ches):			

Project/Site: Cumberland	County Property	Citv/C	County: Cumberla	nd County	Sampling Date: 4/11/2018
Applicant/Owner: CWV, LLC; of	:/o James H. Martin			State: VA	Sampling Point: DP-12
Investigator(s): Robert Goo	odwin, Hannah L. N	Miller Section	on Townshin Range		
			· · · · · ·		Slope (%): 1-3%
Soil Map Unit Name: Cecil s				NWI classific	
Are climatic / hydrologic condit				_ (If no, explain in F	present? Yes X No
Are Vegetation, Soil					
Are Vegetation, Soil	, or Hydrology	naturally problema	atic? (if needed	l, explain any answe	ers in Remarks.)
SUMMARY OF FINDIN	GS – Attach site	map showing san	npling point locat	ions, transects	s, important features, etc.
Hydrophytic Vegetation Pres	ent? Yes X	No	Is the Sampled Area		
Hydric Soil Present?	Yes X		within a Wetland?	$_{Yes}$ $ imes$	No
Wetland Hydrology Present?	Yes X	No			
Remarks:					
Data point was taken	next to flag M-291.				
LIVERGLOCY					
HYDROLOGY				O a sandam da d'a	- ((
Wetland Hydrology Indicat				-	ators (minimum of two required)
Primary Indicators (minimum				Surface Soil	` '
Surface Water (A1)		_ True Aquatic Plants (getated Concave Surface (B8)
X High Water Table (A2)		_ Hydrogen Sulfide Od		X Drainage Pa	
Saturation (A3)		_ Oxidized Rhizospher	-		
X Water Marks (B1)		_ Presence of Reduced			Water Table (C2)
Sediment Deposits (B2)		_ Recent Iron Reductio		Crayfish Bur	
Drift Deposits (B3)		_ Thin Muck Surface (C			isible on Aerial Imagery (C9)
Algal Mat or Crust (B4)	-	_ Other (Explain in Rer	narks)		Stressed Plants (D1)
Iron Deposits (B5)	rial Imagan (DZ)			X Geomorphic	
Inundation Visible on Ae Water-Stained Leaves (I				Shallow Aqu	
· ·	39)			· -	aphic Relief (D4)
Aquatic Fauna (B13)				FAC-Neutra	Tiest (D5)
Field Observations:					
Surface Water Present?		Depth (inches):			
Water Table Present?		Depth (inches):5"			~
Saturation Present? (includes capillary fringe)	Yes No <u>X</u>	Depth (inches):	Wetland	l Hydrology Prese	nt? Yes X No
Describe Recorded Data (str	eam gauge, monitoring	well, aerial photos, pre	vious inspections), if a	vailable:	
· ·	0 0 /	, , , , , ,	, ,,		
Remarks:					
Remarks.					

/EGETATION (Five Strata) – Use scientific n	ames of	olants.		Sampling Point: DP-12
	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 20'x20')	% Cover	Species?	Status	Number of Dominant Species
1. Acer rubrum	15%	YES	FAC	That Are OBL, FACW, or FAC: 6 (A)
2. Liquidambar styraciflua	20%	YES	FAC	Total Number of Descious
3				Total Number of Dominant Species Across All Strata: 7 (B)
i				Openies / toross / tir etrata.
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 85% (A/B)
6	0.50/			Prevalence Index worksheet:
	35%	= Total Cov	er	Total % Cover of: Multiply by:
50% of total cover: 17.	5% _{20% of}	total cover:	7%	
Sapling Stratum (Plot size: 20'x20'				OBL species x 1 =
1 Lindera benzoin	15%	YES	FAC	FACW species x 2 =
2 Carpinus caroliniana	20%	YES	FAC	FAC species x 3 =
3. Fagus grandifolia	10%	YES		FACU species x 4 =
3. r agus grandilolla	10 /0	150	FACU	UPL species x 5 =
4				Column Totals: (A) (B)
5				(,
6				Prevalence Index = B/A =
	45%	= Total Cov	er	Hydrophytic Vegetation Indicators:
50% of total cover: 22.5				1 - Rapid Test for Hydrophytic Vegetation
	20% of	total cover:	3 /0	2 - Dominance Test is >50%
Shrub Stratum (Plot size: 20'x20')				
1				3 - Prevalence Index is ≤3.0¹
2				4 - Morphological Adaptations ¹ (Provide supporting
3				data in Remarks or on a separate sheet)
4				Problematic Hydrophytic Vegetation ¹ (Explain)
5				
				¹ Indicators of hydric soil and wetland hydrology must
6				be present, unless disturbed or problematic.
		= Total Cov	er	Definitions of Five Vegetation Strata:
50% of total cover:	20% of	total cover:		Tree – Woody plants, excluding woody vines,
Herb Stratum (Plot size: 20'x20')				approximately 20 ft (6 m) or more in height and 3 in.
1. Juncus effusus	5%	YES	FACW	(7.6 cm) or larger in diameter at breast height (DBH).
2.				Cardina Wasah alauta ayal dia ayyasah yiras
	-			Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less
3	-			than 3 in. (7.6 cm) DBH.
4				
5	-			Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.
6				approximately 3 to 20 ft (1 to 6 ff) in height.
7				Herb – All herbaceous (non-woody) plants, including
8				herbaceous vines, regardless of size, and woody
9				plants, except woody vines, less than approximately 3 ft (1 m) in height.
10				it (1 m) in noight.
				Woody vine – All woody vines, regardless of height.
11		T-1-1-0		
		= Total Cov		
50% of total cover: 2.5	<u>%</u> 20% of	total cover:	1%	
Woody Vine Stratum (Plot size: 20'x20')				
1. Vitis riparia	15%	YES	FACW	
2.				
	-			
3				
4				
5				Hydrophytic
	15%	= Total Cov	er	Vegetation
50% of total cover:7.5	5% 20% of	total cover	3%	Present? Yes X No
Remarks: (Include photo numbers here or on a separate				<u> </u>
remains. (molude priote numbers field of off a separate	oncot.j			

SOIL Sampling Point: DP-12

Profile Desc	ription: (Describe	to the dept	th needed to docun	nent the i	ndicator	or confirm	the absence of indicators.)
Depth	Matrix		Redo	x Feature:	s		
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture Remarks
0-4	10YR 3/2	100					Sandy Loam
4-18	10YR 6/2	90	7.5YR 5/6	10	С	PL	Sandy Loam
		· 			-		
	-						
							·
		·		·	·		
					-		
		· 			-		
1		la Cara DM	Deduced Metric MC				21 and 22 Plane Distance M. Matrice
Hydric Soil	oncentration, D=Dep	letion, RM=	Reduced Matrix, MS	s=Masked	Sand Gra	ains.	² Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils ³ :
-			D 10 ((07)			•
Histosol			Dark Surface		(CO) (N	U D A 447	2 cm Muck (A10) (MLRA 147)
	oipedon (A2)		Polyvalue Be				
Black Hi	en Sulfide (A4)		Thin Dark Su Loamy Gleye			47, 140)	(MLRA 147, 148) Piedmont Floodplain Soils (F19)
	d Layers (A5)		Z Depleted Mat	,	r <i>z)</i>		(MLRA 136, 147)
	ick (A10) (LRR N)		Redox Dark S	. ,	·6)		Very Shallow Dark Surface (TF12)
	d Below Dark Surfac	e (A11)	Depleted Dar	,	,		Other (Explain in Remarks)
	ark Surface (A12)	- (Redox Depre				
	lucky Mineral (S1) (L	.RR N,	Iron-Mangan			LRR N,	
MLRA	\ 147, 148)		MLRA 13	6)			
	Bleyed Matrix (S4)		Umbric Surfa				³ Indicators of hydrophytic vegetation and
	Redox (S5)		Piedmont Flo				
	Matrix (S6)		Red Parent N	/laterial (F	21) (MLR	A 127, 147	7) unless disturbed or problematic.
Restrictive I	Layer (if observed):						
Type:							
Depth (in	ches):						Hydric Soil Present? Yes X No No
Remarks:							

Project/Site: Cumberland Cou	nty Property	City/C	County: Cumberlan	d County	Sampling Date: 4/11/2018
Applicant/Owner: CWV, LLC; c/o J			,		Sampling Point: <u>DP-12, UPL</u>
Investigator(s): Hannah L. Miller		n Section	on Township Range	Tax Map #37-A	
Landform (hillslope, terrace, etc.):					
Soil Map Unit Name: Cecil sandy				NWI classific	· · · · · · · · · · · · · · · · · · ·
Are climatic / hydrologic conditions o				(If no, explain in R	
Are Vegetation, Soil,					present? Yes X No
Are Vegetation, Soil,				explain any answe	
Are vegetation, Joii,	or riyarology	naturally problem	alic: (Il liceded,	explain any answe	is in Kemarks.)
SUMMARY OF FINDINGS -	Attach site ma	ap showing san	npling point locati	ions, transects	, important features, etc.
Hydrophytic Vegetation Present?	Yes	No_X	l- 11- 0		
Hydric Soil Present?	Yes		Is the Sampled Area within a Wetland?	Yes	No <u>X</u>
Wetland Hydrology Present?	Yes	No X			<u> </u>
Remarks:					
Data point was taken adjace	ent to flag M-291	1.			
HYDROLOGY					
Wetland Hydrology Indicators:				Secondary Indica	ators (minimum of two required)
Primary Indicators (minimum of one	in required; about	all that apply)		Surface Soil	· · · · · · · · · · · · · · · · · · ·
	-		(D4.4)		
Surface Water (A1)		Frue Aquatic Plants (getated Concave Surface (B8)
High Water Table (A2) Saturation (A3)		Hydrogen Sulfide Od Dyidized Rhizospher	es on Living Roots (C3)	Drainage Pa Moss Trim L	
Water Marks (B1)		Presence of Reduce			Water Table (C2)
Sediment Deposits (B2)			on in Tilled Soils (C6)	Crayfish Bur	
Drift Deposits (B3)		Thin Muck Surface (isible on Aerial Imagery (C9)
Algal Mat or Crust (B4)		Other (Explain in Rer			tressed Plants (D1)
Iron Deposits (B5)	_	` '	,		Position (D2)
Inundation Visible on Aerial Image	agery (B7)			Shallow Aqu	
Water-Stained Leaves (B9)				Microtopogra	aphic Relief (D4)
Aquatic Fauna (B13)				FAC-Neutral	Test (D5)
Field Observations:					
Surface Water Present? Yes	No <u>X</u>	Depth (inches):			
Water Table Present? Yes	No <u>X</u>	Depth (inches):			
Saturation Present? Yes	No <u>X</u>	Depth (inches):	Wetland	Hydrology Preser	nt? Yes No <u>X</u>
(includes capillary fringe)				a ilakia.	
Describe Recorded Data (stream ga	auge, monitoring we	eii, aeriai photos, pre	evious inspections), if av	raliable:	
Demontos					
Remarks:					

/EGETATION (Five Strata) – Use scientific ı	names of	olants.	Sampling Point: DP-12, UPL
001-001	Absolute	Dominant Indic	eator Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size: 20'x20') 1. Pinus taeda	% Cover 85%	Species? Star	- Number of Dominant Species
2			Total Number of Dominant
3			Species Across All Strata: 2 (B)
4			Percent of Dominant Species
5			That Are OBL, FACW, or FAC: 50% (A/B)
6			
	85%	= Total Cover	Prevalence Index worksheet:
50% of total cover: 42	.5% _{20% of}	total cover: 17	% Total % Cover of: Multiply by:
Sapling Stratum (Plot size: 20'x20'			OBL species
1. Fagus grandifolia	15%	YES FA	CU FACW species 0 x 2 = 0
2			FAC species <u>85</u> x 3 = <u>255</u>
3			FACU species 15 x 4 = 60
4			UPL species 0 x 5 = 0
5			Column Totals: <u>100</u> (A) <u>315</u> (B)
6.			Prevalence Index = B/A = 3.15
<u> </u>	15%	= Total Cover	Hydrophytic Vegetation Indicators:
50% of total cover: 7.5			
Shrub Stratum (Plot size: 20'x20')	20% of	total cover: 07	2 - Dominance Test is >50%
			3 - Prevalence Index is ≤3.0 ¹
1			<u> </u>
2			data in Remarks or on a separate sheet)
3			Problematic Hydrophytic Vegetation ¹ (Explain)
4			
5		·	Indicators of hydric soil and wetland hydrology must
6		Total Cours	be present, unless disturbed or problematic.
		= Total Cover	Definitions of Five Vegetation Strata:
50% of total cover: <u>Herb Stratum</u> (Plot size:)			Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in.
1			(7.6 cm) or larger in diameter at breast height (DBH).
2			caping recay plants, exclusing recay rines,
3			approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.
4			
5			Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.
7			Herb – All herbaceous (non-woody) plants, including
8			herbaceous vines, regardless of size, and woody
9			plants, except woody vines, less than approximately 3 ft (1 m) in height.
10			
11			Woody vine – All woody vines, regardless of height.
		= Total Cover	
50% of total cover:	20% of	total cover:	
Woody Vine Stratum (Plot size: 20'x20')	2070 01		—
1			
2			
3			
			—
5		= Total Cover	Hydrophytic
			Vegetation Present? Yes No X
50% of total cover:		total cover:	
Remarks: (Include photo numbers here or on a separate	sheet.)		

Sampling Point: DP-12, UPL

	Matrix		Redox Features	Testing
(inches)	Color (moist)	<u>%</u>	Color (moist) % Type ¹ Loc ²	
0-4	10YR 6/3	100		Sandy Loam
4-10	2.5Y 6/4	100		Sandy Loam
10-18	10YR 6/6	100		Sandy C. Loam
				-
				· ·
		nlation DM C	Laducad Matrix MC Masked Cond Crains	21 continue DI Doro Lining M Matrix
	Indicators:	epielion, Rivi=R	deduced Matrix, MS=Masked Sand Grains.	² Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils ³ :
_ Histosol			Dark Surface (S7)	2 cm Muck (A10) (MLRA 147)
	oipedon (A2)		Polyvalue Below Surface (S8) (MLRA 147	
Black Hi			Thin Dark Surface (S9) (MLRA 147, 148)	· • - · · · · · · · · · · · · · · · · ·
Hydroge	en Sulfide (A4)		Loamy Gleyed Matrix (F2)	Piedmont Floodplain Soils (F19)
	d Layers (A5)		Depleted Matrix (F3)	(MLRA 136, 147)
	ick (A10) (LRR N)		Redox Dark Surface (F6)	Very Shallow Dark Surface (TF12)
	d Below Dark Surfa	ace (A11)	Depleted Dark Surface (F7)	Other (Explain in Remarks)
	ark Surface (A12) Mucky Mineral (S1)	/I DD N	Redox Depressions (F8)Iron-Manganese Masses (F12) (LRR N,	
-	147, 148)	(LKK N,	MLRA 136)	
	Gleyed Matrix (S4)		Umbric Surface (F13) (MLRA 136, 122)	³ Indicators of hydrophytic vegetation and
	Redox (S5)		Piedmont Floodplain Soils (F19) (MLRA 1	
	Matrix (S6)		Red Parent Material (F21) (MLRA 127, 14	
estrictive I	Layer (if observed	d):		
Туре:			<u> </u>	
	-l\·		<u></u>	Hydric Soil Present? Yes No ×
Depth (ind	cnes):			
Depth (included)	cnes):			
	cnes):			

Project/Site: Cumberland	County Propert	y Citv/C	county: Cumberlar	nd County	Sampling Date: 4/11/2018
Applicant/Owner: CWV, LLC; of					Sampling Point: DP-13
Investigator(s): Hannah L.		odwin Sectio	on, Township, Range: _	Tax Map # 37-	A-69
• · · /					Slope (%):0-2%
					Datum:
Soil Map Unit Name: Pacole			_	NWI classifi	
Are climatic / hydrologic condi					
			bad? Ara "Narm	_ (If no, explain in F	present? Yes X No
Are Vegetation, Soil					
Are Vegetation, Soil	, or Hydrology _	naturally problema	atic? (if needed	, explain any answe	ers in Remarks.)
SUMMARY OF FINDIN	GS – Attach site	e map showing san	npling point locat	ions, transects	s, important features, etc.
Hydrophytic Vegetation Pres	ent? Yes	< No	Is the Sampled Area	•	
Hydric Soil Present?	Yes X		within a Wetland?	$_{Yes}$	No
Wetland Hydrology Present?	Yes X	,			
Remarks:		<u> </u>			
Data point was taken	next to flag H-333				· ·
HYDROLOGY					
				Cocondon/Indio	otors (minimum of two required)
Wetland Hydrology Indicat		and all that and A		-	ators (minimum of two required)
Primary Indicators (minimum			D(1)	· · · · · · · · · · · · · · · · · · ·	Cracks (B6)
Surface Water (A1)		True Aquatic Plants (egetated Concave Surface (B8)
		Hydrogen Sulfide Od		X Drainage Pa	
Saturation (A3)		Oxidized Rhizospher	-		
Water Marks (B1)		Presence of Reduced			Water Table (C2)
Sediment Deposits (B2)		Recent Iron Reductio		Crayfish Bu	
X Drift Deposits (B3)		Thin Muck Surface (C			/isible on Aerial Imagery (C9)
Algal Mat or Crust (B4)	-	Other (Explain in Rer	narks)	Stunted or S X Geomorphic	Stressed Plants (D1)
Iron Deposits (B5) Inundation Visible on Ae	rial Imagary (R7)			Shallow Aqu	
X Water-Stained Leaves (I					raphic Relief (D4)
Aquatic Fauna (B13)	59)			FAC-Neutra	
				FAC-Neulla	i Test (D3)
Field Observations:	Van Na	X Describe (Secretaria)			
Surface Water Present?		Depth (inches):			
Water Table Present?		Depth (inches):7"			~
Saturation Present? (includes capillary fringe)	Yes _ ^ No	Depth (inches):	Wetland	Hydrology Prese	nt? Yes X No
Describe Recorded Data (str	eam gauge, monitorir	ng well, aerial photos, pre	vious inspections), if a	vailable:	
,			• ,		
Remarks:					
rtomante.					

/EGETATION (Five Strata) – Use scientific na	mes of	plants.		Sampling Point: DP-13
· · · · · · · · · · · · · · · · · · ·	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 20'x20')		Species?	Status	Number of Dominant Species
1. Liquidambar styraciflua	20%	YES	FAC	That Are OBL, FACW, or FAC: 6 (A)
2. Platanus occidentalis	15%	YES	FACW	
3. Carpinus caroliniana	10%	YES	FAC	Total Number of Dominant Species Across All Strata: 7 (B)
	1070	120	1710	Species Across All Strata: (B)
				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 85% (A/B)
6		· <u></u>		
	45%	= Total Cove	er	Prevalence Index worksheet:
22.5				Total % Cover of: Multiply by:
50% of total cover: 22.5	<u>70</u> 20% of	total cover:	9 70	OBL species x 1 =
Sapling Stratum (Plot size: 20'x20'				FACW species x 2 =
1. Carpinus caroliniana	15%	YES	FAC	
2. Fagus grandifolia	5%	YES	FACU	FAC species x 3 =
				FACU species x 4 =
3				UPL species x 5 =
4				Column Totals: (A) (B)
5		. <u> </u>		(1)
6.				Prevalence Index = B/A =
0	20%	= Total Cove		
				Hydrophytic Vegetation Indicators:
50% of total cover: 10%	20% of	total cover:	4%	,1 - Rapid Test for Hydrophytic Vegetation
Shrub Stratum (Plot size: 20'x20'				✓ 2 - Dominance Test is >50%
				3 - Prevalence Index is ≤3.0 ¹
1				<u> </u>
2				4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
3				. ,
4				Problematic Hydrophytic Vegetation ¹ (Explain)
5				¹ Indicators of hydric soil and wetland hydrology must
6				be present, unless disturbed or problematic.
	:	= Total Cove	er	Definitions of Five Vegetation Strata:
50% of total cover:	20% of	total cover		
		lotal 00.0		Tree – Woody plants, excluding woody vines,
Herb Stratum (Plot size: 20'x20')				approximately 20 ft (6 m) or more in height and 3 in.
1				(7.6 cm) or larger in diameter at breast height (DBH).
2				Sapling – Woody plants, excluding woody vines,
3			_	approximately 20 ft (6 m) or more in height and less
A				than 3 in. (7.6 cm) DBH.
4				
5				Shrub – Woody plants, excluding woody vines,
6				approximately 3 to 20 ft (1 to 6 m) in height.
7				Herb – All herbaceous (non-woody) plants, including
				herbaceous vines, regardless of size, and woody
8				plants, except woody vines, less than approximately 3
9				ft (1 m) in height.
10		· ·		
11				Woody vine – All woody vines, regardless of height.
		= Total Cove	or	
		= TOTAL COVE	51	
50% of total cover:	20% of	total cover:		
Woody Vine Stratum (Plot size: 20'x20')				
1 Vitis riparia	20%	YES	FACW	
2. Smilax rotundifolia	15%	YES	FAC	
2. Grillax roturidilolla	1370		FAC	
3				
4				
5.				
0	35%	T-1-10		Hydrophytic
		= Total Cove		Vegetation
50% of total cover:17.5	$\frac{\%}{20\%}$ 20% of	total cover:	7%	Present? Yes X No
Remarks: (Include photo numbers here or on a separate sl	hoot \			
Tromano. (modao prioto namboro nore el en a coparate di	1001.7			

SOIL Sampling Point: DP-13

Profile Description: (De	escribe to th	e depth n	eeded to docur	ment the i	ndicator	or confirm	n the abs	ence of indi	cators.)		
	Matrix			x Features	3						
(inches) Color (n			Color (moist)	%	Type ¹	Loc ²	<u>Textu</u>		Rem	narks	
0-4 10YR 5/2	2 10	00	_				Sandy	Loam			
4-18 10YR 7/	2 9	90 1	0YR 6/6	10	С	PL	Sandy	Loam			
											<u> </u>
					-		-				
<u> </u>											
					-		-				
·											
¹ Type: C=Concentration	, D=Depletion	n, RM=Red	duced Matrix, M	S=Masked	Sand Gra	ains.	² Locatio	n: PL=Pore	Lining, M=N	Matrix.	
Hydric Soil Indicators:										tic Hydric Sc	oils³:
Histosol (A1)		_	Dark Surface	e (S7)			_	2 cm Mud	ck (A10) (M	LRA 147)	
Histic Epipedon (A2))	_	Polyvalue Be	elow Surfa	ce (S8) (N	ILRA 147,	148) _	Coast Pra	airie Redox	(A16)	
Black Histic (A3)		_	Thin Dark Su			47, 148)			147, 148)		
Hydrogen Sulfide (A	,	-	Loamy Gleye		F2)		-			Soils (F19)	
Stratified Layers (A5	,	2	Depleted Ma					•	136, 147)		
2 cm Muck (A10) (LI		_	Redox Dark				-			furface (TF12))
Depleted Below DarThick Dark Surface ('') _	Depleted Da Redox Depre				-	Other (E)	plain in Re	marks)	
Sandy Mucky Minera		N.	Iron-Mangan			I RR N					
MLRA 147, 148)	ar (O1) (Litti		MLRA 13		33 (1 12) (
Sandy Gleyed Matrix	x (S4)		Umbric Surfa	-	MLRA 13	6, 122)		³ Indicators	of hydrophy	tic vegetation	and
Sandy Redox (S5)	` ,	_	Piedmont Flo				18)			st be present,	
Stripped Matrix (S6)		_	Red Parent I	Material (F	21) (MLR	A 127, 147	7)	unless dist	urbed or pr	oblematic.	
Restrictive Layer (if ob	served):										
Type:											
Depth (inches):							Hydric	Soil Presen	t? Yes_	× No_	
Remarks:							1 -				

Project/Site: Cumberland County Property	City/County: Cumberland County Sampling Date: 4/11/2018
Applicant/Owner: CWV, LLC; c/o James H. Martin	State: VA Sampling Point: <u>DP-13, UPL</u>
Investigator(s): Shannon D. Hill, Robert Goodwin	Section, Township, Range: Tax Map #37-A-69
	Local relief (concave, convex, none): Slope (%): 2-4%
Subregion (LRR or MLRA): n/a Lat: 37.58	
Soil Map Unit Name: Pacolet Wateree complex	NWI classification: UPL
Are climatic / hydrologic conditions on the site typical for this tim	
Are Vegetation, Soil, or Hydrology signif	\sim
Are Vegetation, Soil, or Hydrology natur	
natar	(ii needed, explain any anomore in remarks.)
SUMMARY OF FINDINGS – Attach site map sho	owing sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No_>	Is the Sampled Area
Hydric Soil Present? Yes No_>	within a Wetland? Yes NoX
Wetland Hydrology Present? Yes No _>	<u>′</u>
Remarks:	
Data point was taken adjacent to flag H-333.	
Data point mas tanem asjacom to mag m soot	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that	 ` , ,
	uatic Plants (B14) Sparsely Vegetated Concave Surface (B8)
	n Sulfide Odor (C1) Drainage Patterns (B10)
	Rhizospheres on Living Roots (C3) Moss Trim Lines (B16)
	e of Reduced Iron (C4) Dry-Season Water Table (C2)
	ron Reduction in Tilled Soils (C6) Crayfish Burrows (C8)
	ck Surface (C7) Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4) Other (E Iron Deposits (B5)	xplain in Remarks) Stunted or Stressed Plants (D1) Geomorphic Position (D2)
Inundation Visible on Aerial Imagery (B7)	Shallow Aquitard (D3)
Water-Stained Leaves (B9)	Microtopographic Relief (D4)
Aquatic Fauna (B13)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No X Depth (inches):
Water Table Present? Yes No X Depth (
Saturation Present? Yes No X Depth (, ———
(includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aeria	I photos, previous inspections), if available:
Remarks:	

/EGETATION (Five Strata) – Use scientific na	mes of p	olants.		Sampling Point: DP-13, UPL
201/201	Absolute	Dominant		Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size: <u>20'x20'</u>) 1. Liriodendron tulipfera	% Cover 40%	Species?	Status FACU	Number of Dominant Species That Are ORL FACW or FAC: 1 (A)
				That Are OBL, FACW, or FAC: 1 (A)
2			-	Total Number of Dominant Species Across All Strata: 5 (B)
3				Species Across All Strata: 5 (B)
4				Percent of Dominant Species
5 6.				That Are OBL, FACW, or FAC: 20% (A/B)
0	40%	= Total Cov		Prevalence Index worksheet:
20%				Total % Cover of: Multiply by:
50% of total cover: 20%	20% of	total cover:	0 70	OBL species 0 x 1 = 0
Sapling Stratum (Plot size: 20'x20')	00.50/		E4011	FACW species $0 x 2 = 0$
1. Fagus grandifolia	22.5%	YES	FACU	FAC species 10 x 3 = 30
2. Ilex opaca	10%	YES	FAC	FACU species 90 x 4 = 360
	10%	YES	FACU	UPL species 0 x 5 = 0
4				Column Totals:100 (A)390 (B)
5				
6				Prevalence Index = B/A = 3.90
		= Total Cov		Hydrophytic Vegetation Indicators:
50% of total cover: <u>21.2</u>	<u>5%</u> 20% of	total cover:	8.5%	1 - Rapid Test for Hydrophytic Vegetation
Shrub Stratum (Plot size: 20'x20'				2 - Dominance Test is >50%
1				3 - Prevalence Index is ≤3.0 ¹
2				4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
3				1
4				Problematic Hydrophytic Vegetation ¹ (Explain)
5				
6				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
	:	= Total Cov	er	Definitions of Five Vegetation Strata:
50% of total cover:	20% of	total cover:		
Herb Stratum (Plot size: 20'x20')				Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in.
Polystichum acrostichoides	17.5%	YES	FACU	(7.6 cm) or larger in diameter at breast height (DBH).
2				Sapling – Woody plants, excluding woody vines,
3.				approximately 20 ft (6 m) or more in height and less
4.				than 3 in. (7.6 cm) DBH.
5.				Shrub – Woody plants, excluding woody vines,
6				approximately 3 to 20 ft (1 to 6 m) in height.
7				Herb – All herbaceous (non-woody) plants, including
8				herbaceous vines, regardless of size, and woody
9				plants, except woody vines, less than approximately 3
10				ft (1 m) in height.
11.				Woody vine – All woody vines, regardless of height.
		= Total Cov	er	
7.00				
50% of total cover: <u>8.75%</u>	<u>6</u> 20% of	total cover:	3.5%	
Woody Vine Stratum (Plot size: 20'x20') 1. Smilax rotundifolia	10%	VE0	E40	
· ·	10 /0	YES	<u>FAC</u>	
2				
3				
4				
5				Hydrophytic
	10%	= Total Cov	er	Vegetation
50% of total cover:5%	20% of	total cover:	2%	Present? Yes No
Remarks: (Include photo numbers here or on a separate s	heet.)			•

Sampling Point: DP-13, UPL

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist) %	Type ¹ Loc ²	Texture		Remarks	
0-4	10YR 4/3	100	Color (Illoist) /6	Type Loc			Remarks	
	•				Sandy Loam			
4-18	10YR 5/6	100			Sandy C. Loam			
	-							
		-						
		-						
					2			
	oncentration, D=Dep Indicators:	oletion, RM=	Reduced Matrix, MS=Masked S	and Grains.	² Location: PL=	=Pore Lining, ors for Probl		lria Caila ³ .
•			Doub Conford (C7)				-	
_ Histosol	oipedon (A2)		Dark Surface (S7)Polyvalue Below Surface	(CO) /MI DA 1/17		m Muck (A10 ast Prairie Re		1)
Flistic Ep Black Hi			Thin Dark Surface (S9) (. , .	· —	MLRA 147, 1		
	n Sulfide (A4)		Loamy Gleyed Matrix (F2			dmont Flood		F19)
	Layers (A5)		Depleted Matrix (F3)	-,		MLRA 136, 1		10,
	ick (A10) (LRR N)		Redox Dark Surface (F6))		ry Shallow Da	•	(TF12)
	d Below Dark Surfac	ce (A11)	Depleted Dark Surface (F	=7)	Oth	ner (Explain ir	n Remarks)	
	ark Surface (A12)		Redox Depressions (F8)					
	lucky Mineral (S1) (LRR N,	Iron-Manganese Masses	(F12) (LRR N,				
	147, 148)		MLRA 136)	LDA 420 400\	31	-46		
	edox (S5)		Umbric Surface (F13) (M Piedmont Floodplain Soil			ators of hydro		
-	Matrix (S6)		Red Parent Material (F21			and hydrology ss disturbed o		
	_ayer (if observed)	:	Red I drefit Material (I 2) (MEICA 121, 14		oo diotarboa t	or problema	
Type:	, (,							
Depth (inc					Hydric Soil P	resent? Y	es	No ×
. ,					Trydric Con 1	TOSCIIC: I		
emarks:								

Project/Site: Cumberland	County Property	/ Citv/C	county: Cumberlan	nd County	Sampling Date: 4/11/2018
Applicant/Owner: CWV, LLC; of					Sampling Point: DP-14
Investigator(s): Hannah L.		odwin Section	on, Township, Range: _	State Tax Map # 37-	Gampling Forms
• · · · <u> </u>					Slope (%):0-2%
					Datum:
Soil Map Unit Name: Pacole		.at	_	NWI classifi	
Are climatic / hydrologic condi		I for this time of veer?			
			es No	(If no, explain in F	present? Yes X No
Are Vegetation, Soil					
Are Vegetation, Soil	, or Hydrology	naturally problema	atic? (If needed,	, explain any answe	ers in Remarks.)
SUMMARY OF FINDIN	GS – Attach site	map showing san	npling point locat	ions, transects	s, important features, etc.
Hydrophytic Vegetation Pres	ent? Yes X	, No	Is the Sampled Area		
Hydric Soil Present?	Yes X		within a Wetland?	$_{Yes}$ $ imes$	No
Wetland Hydrology Present?	Yes X	,			
Remarks:					
D () ()					ļ.
Data point was taken	next to flag M-247.	•			
HYDROLOGY					
Wetland Hydrology Indicat	oral			Cocondon, India	otoro (minimum of two required)
		a alcall that apply		-	ators (minimum of two required)
Primary Indicators (minimum			D14)		Cracks (B6)
Surface Water (A1)		True Aquatic Plants (getated Concave Surface (B8)
X High Water Table (A2)		Hydrogen Sulfide Od		X Drainage Pa	
Saturation (A3)		Oxidized Rhizosphere	= : :		
Water Marks (B1)		Presence of Reduced			Water Table (C2)
Sediment Deposits (B2)		Recent Iron Reductio		Crayfish Bu	
Drift Deposits (B3)		Thin Muck Surface (C			/isible on Aerial Imagery (C9)
Algal Mat or Crust (B4)	_	Other (Explain in Rer	narks)		Stressed Plants (D1)
Iron Deposits (B5)	-:(DZ)			X Geomorphic	
Inundation Visible on Ae				Shallow Aqu	
X Water-Stained Leaves (I	39)				aphic Relief (D4)
Aquatic Fauna (B13)				FAC-Neutra	I Test (D5)
Field Observations:		(-			
Surface Water Present?		Depth (inches):			
Water Table Present?		Depth (inches): 6"			~
Saturation Present? (includes capillary fringe)	Yes _ X No	Depth (inches):	Wetland	Hydrology Prese	nt? Yes X No
Describe Recorded Data (str	eam gauge, monitorin	g well, aerial photos, pre	vious inspections), if a	vailable:	
,			, ,,		ļ.
Remarks:					
rtomante.					

/EGETATION (Five Strata) – Use scientific na	mes of p	olants.		Sampling Point: DP-14
	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 20'x20')		Species?	Status	Number of Dominant Species
1. Betula nigra	20%	YES	FACW	That Are OBL, FACW, or FAC: 6 (A)
2. Acer rubrum	20%	YES	FAC	Total Number of Dominant
3				Species Across All Strata: 6 (B)
4				
5				Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)
6.				That Are OBE, FACW, OF FAC.
<u> </u>	40%	= Total Cove		Prevalence Index worksheet:
200/				Total % Cover of: Multiply by:
50% of total cover: 20%	20% of	total cover:	0 70	OBL species x 1 =
Sapling Stratum (Plot size: 20'x20'				FACW species x 2 =
1. Lindera benzoin	30%	YES	FAC	FAC species x 3 =
2. Betula nigra	10%	YES	FACW	FACU species x 4 =
3				
4				UPL species x 5 =
5				Column Totals: (A) (B)
6.				Prevalence Index = B/A =
0	40%	= Total Cove		Hydrophytic Vegetation Indicators:
000/				
50% of total cover: <u>20%</u>	20% of	total cover:	8%	1 - Rapid Test for Hydrophytic Vegetation
Shrub Stratum (Plot size: 20'x20'				✓ 2 - Dominance Test is >50%
1				3 - Prevalence Index is ≤3.0 ¹
2				4 - Morphological Adaptations ¹ (Provide supporting
3				data in Remarks or on a separate sheet)
4				Problematic Hydrophytic Vegetation ¹ (Explain)
5				
6			-	¹ Indicators of hydric soil and wetland hydrology must
0		Total Cov		be present, unless disturbed or problematic.
	:	= Total Cove	3 1	Definitions of Five Vegetation Strata:
50% of total cover:	20% of	total cover:		Tree – Woody plants, excluding woody vines,
Herb Stratum (Plot size: 20'x20')				approximately 20 ft (6 m) or more in height and 3 in.
1. Juncus effusus	10%	YES	FACW	(7.6 cm) or larger in diameter at breast height (DBH).
2				Sapling – Woody plants, excluding woody vines,
3				approximately 20 ft (6 m) or more in height and less
4.				than 3 in. (7.6 cm) DBH.
5.				Shrub – Woody plants, excluding woody vines,
6				approximately 3 to 20 ft (1 to 6 m) in height.
			-	Hark All harbassaus (non woods) plants including
7				Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody
8				plants, except woody vines, less than approximately 3
9				ft (1 m) in height.
10				Woody vine – All woody vines, regardless of height.
11				
	10%	= Total Cove	er	
50% of total cover: 5%	20% of	total cover:	2%	
Woody Vine Stratum (Plot size: 20'x20')		·-		
1 Vitis riparia	10%	YES	FACW	
2.				
-				
3				
4				
5				Hydrophytic
	10%	= Total Cove	er	Vegetation
50% of total cover: _ 5%	20% of	total cover:	2%	Present? Yes No

SOIL Sampling Point: DP-14

Profile Desc	cription: (Describe	to the dep	th needed to docu	ment the	indicator	or confirm	the absenc	e of indica	itors.)	
Depth	Matrix			x Feature	s					
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	_	Remarks	S
0-4	10YR 5/2	100					Sandy Lo	am		
4-18	10YR 6/2	80	5YR 5/8	20	C	PL	Sandy Loa	m		
										_
								_		
	-							_		
								_		
	oncentration, D=Dep	letion, RM	=Reduced Matrix, M	S=Masked	d Sand Gra	ains.			ning, M=Matri	
Hydric Soil	Indicators:						Indio	cators for	Problematic I	Hydric Soils³:
Histosol			Dark Surface	. ,					(A10) (MLRA	•
	pipedon (A2)		Polyvalue Be				148)		rie Redox (A16	6)
	istic (A3)		Thin Dark Su			47, 148)			147, 148)	(=.5)
	en Sulfide (A4)		Loamy Gleye		(F2)				Floodplain Soil	ls (F19)
	d Layers (A5)		X Depleted Ma		-c\			•	136, 147)	oo (TC10)
	uck (A10) (LRR N) d Below Dark Surface	Δ(Δ11)	Redox Dark Depleted Da						ow Dark Surfa Iain in Remark	
	ark Surface (A12)	C (A11)	Redox Depre					Otrici (Exp	iain in Keman	(3)
	Mucky Mineral (S1) (L	RR N,	Iron-Mangan			LRR N,				
	A 147, 148)		MLRA 13		` , ,					
	Gleyed Matrix (S4)		Umbric Surfa	ace (F13)	(MLRA 13	6, 122)	³ ln	dicators of	hydrophytic ve	egetation and
Sandy F	Redox (S5)		Piedmont Flo					etland hyd	rology must be	e present,
	d Matrix (S6)		Red Parent I	Material (F	21) (MLR	A 127, 147	7) u	nless distu	rbed or proble	matic.
Restrictive	Layer (if observed):									
Type:										
Depth (in	ches):						Hydric So	il Present	? Yes <u> </u>	No
Remarks:							•			

Project/Site: Cumberland C	County Property	City/C	County: Cumberlar	nd County	Sampling Date: 4/11/2018
Applicant/Owner: CWV, LLC; c	/o James H. Martin		,		Sampling Point: <u>DP-14, UPL</u>
Investigator(s): Hannah L. Mi	ller	Section	on, Township, Range: _	Tax Map #45-A	
• ',	· Terrace	L ocal rel	ief (concave_convex_n	one).	Slope (%): 1-3%
Subregion (LRR or MLRA): n/a					olopo (70):
Soil Map Unit Name: Pacolet \			Long		cation: UPL
Are climatic / hydrologic condition		ur this time of year?	/os X No	(If no, explain in F	
Are Vegetation, Soil					present? Yes X No
				, explain any answ	
Are Vegetation, Soil	, or Hydrology	naturally problem	alic? (ii needed	, explain any answe	ers in Remarks.)
SUMMARY OF FINDING	S – Attach site m	ap showing san	npling point locat	ions, transects	s, important features, etc.
Hydrophytic Vegetation Presen	t? Yes	No_X	Is the Sampled Area	i	
Hydric Soil Present?	Yes		within a Wetland?		No <u> </u>
Wetland Hydrology Present?	Yes				
Remarks:					
		_			
Data point was taken ad	jacent to flag M-24	· / .			
HYDROLOGY					
Wetland Hydrology Indicators	<u> </u>			Secondary Indic	ators (minimum of two required)
Primary Indicators (minimum of		(all that apply)		Surface Soi	
	•		(D14)		
Surface Water (A1)		True Aquatic Plants (egetated Concave Surface (B8)
High Water Table (A2) Saturation (A3)		Hydrogen Sulfide Od	es on Living Roots (C3)	_	atterns (B10)
Water Marks (B1)		Presence of Reduce	-		Water Table (C2)
Sediment Deposits (B2)		Recent Iron Reduction		Crayfish Bu	
Sediment Deposits (B2) Drift Deposits (B3)		Thin Muck Surface (/isible on Aerial Imagery (C9)
· · · ·		Other (Explain in Rer			Stressed Plants (D1)
Algal Mat or Crust (B4) Iron Deposits (B5)		Other (Explain in Nei	ilaiks)		Position (D2)
Inundation Visible on Aeria	ıl İmagery (B7)			Shallow Aqu	
Water-Stained Leaves (B9)	• • • •				raphic Relief (D4)
Aquatic Fauna (B13)	,			FAC-Neutra	• • • •
Field Observations:				1710 1104114	
	Yes NoX_	Denth (inches):			
	Yes No _X				
	Yes No _X			Hydrology Proce	nt? Yes No X
(includes capillary fringe)	res INO	Deptif (inches).	welland	nyurology Frese	III! Tes NO
Describe Recorded Data (strea	m gauge, monitoring w	vell, aerial photos, pre	evious inspections), if av	vailable:	
Remarks:					

/EGETATION (Five Strata) – Use scientific na	mes of p	olants.		Sampling Point: DP-14, UPL
201.001	Absolute	Dominant	Indicator	Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size: _20'x20')	% Cover	Species?		Number of Dominant Species
1. Liriodendron tulipfera	30%	YES	FACU	That Are OBL, FACW, or FAC: 1 (A)
2. Fagus grandifolia	30%	YES	FACU	Total Number of Dominant
3				Species Across All Strata: 4 (B)
4				Descent of Dominant Chaping
5				Percent of Dominant Species That Are OBL, FACW, or FAC: 25% (A/B)
6				- '
	60%	= Total Cov	er	Prevalence Index worksheet:
50% of total cover: 30%				Total % Cover of: Multiply by:
Sapling Stratum (Plot size: 20'x20')	20 /6 01	iolai covei.		OBL species 0 x 1 = 0
				FACW species <u>0</u> x 2 = <u>0</u>
1				FAC species <u>20</u> x 3 = <u>60</u>
2				FACU species <u>80</u> x 4 = <u>320</u>
3				UPL species 0 x 5 = 0
4				Column Totals: 100 (A) 380 (B)
5				
6				Prevalence Index = B/A = 3.80
	:	= Total Cov	er	Hydrophytic Vegetation Indicators:
50% of total cover:	20% of	total cover:		1 - Rapid Test for Hydrophytic Vegetation
Shrub Stratum (Plot size: 20'x20')	2070 0.	total cover.		2 - Dominance Test is >50%
				3 - Prevalence Index is ≤3.0 ¹
1				4 - Morphological Adaptations ¹ (Provide supporting
2				data in Remarks or on a separate sheet)
3				Problematic Hydrophytic Vegetation ¹ (Explain)
4				
5				¹ Indicators of hydric soil and wetland hydrology must
6				be present, unless disturbed or problematic.
	=	= Total Cov	er	Definitions of Five Vegetation Strata:
50% of total cover:	20% of	total cover:		Tool Woods dealers and dealers and dealers
Herb Stratum (Plot size: 20'x20')				Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in.
1. Polystichum acrostichoides	20%	YES	FACU	(7.6 cm) or larger in diameter at breast height (DBH).
2				Continue Manda de man
0				Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less
				than 3 in. (7.6 cm) DBH.
4				Character and address of the control
5				Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.
6				
7				Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody
8				plants, except woody vines, less than approximately 3
9				ft (1 m) in height.
10				Woody vine – All woody vines, regardless of height.
11				Woody vine - All woody vines, regardless of height.
	20% :	= Total Cov	er	
50% of total cover: 10%	20% of	total cover:	4%	
Woody Vine Stratum (Plot size: 20'x20')			. , ,	
1. Smilax rotundifolia	20%	YES	FAC	
·· ·				
2				
3				
4				
5				Hydrophytic
	20%:	= Total Cov	er	Vegetation
50% of total cover:10%	<u>6</u> 20% of	total cover:	4%	Present? Yes No_X
Remarks: (Include photo numbers here or on a separate sh				<u> </u>
,	,			

Sampling Point: DP-14, UPL

Depth	Matrix		needed to document the indicator or cont Redox Features	
(inches)	Color (moist)	%	Color (moist) % Type ¹ Loc ²	
0-6	10YR 4/2	100		Sandy Loam_
6-14	10YR 6/4	100		Sandy Loam
14-18	10YR 6/6	100		Sandy C. Loam
	-			
	-			
1= 0 0				21
Hydric Soil I		pletion, RIVI=R	educed Matrix, MS=Masked Sand Grains.	² Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils ³ :
Histosol			Dark Surface (S7)	2 cm Muck (A10) (MLRA 147)
	oipedon (A2)		Polyvalue Below Surface (S8) (MLRA 1	
Black Hi			Thin Dark Surface (S9) (MLRA 147, 148	· · · · · · · · · · · · · · · · · · ·
Hydroge	n Sulfide (A4)		Loamy Gleyed Matrix (F2)	Piedmont Floodplain Soils (F19)
	l Layers (A5)		Depleted Matrix (F3)	(MLRA 136, 147)
	ck (A10) (LRR N)	(0.4.4)	Redox Dark Surface (F6)	Very Shallow Dark Surface (TF12)
	d Below Dark Surfa ark Surface (A12)	ce (A11)	Depleted Dark Surface (F7)Redox Depressions (F8)	Other (Explain in Remarks)
	lucky Mineral (S1) (LRR N.	Iron-Manganese Masses (F12) (LRR N,	
	147, 148)	(=,	MLRA 136)	
	leyed Matrix (S4)		Umbric Surface (F13) (MLRA 136, 122)	³ Indicators of hydrophytic vegetation and
	edox (S5)		Piedmont Floodplain Soils (F19) (MLRA	
	Matrix (S6)		Red Parent Material (F21) (MLRA 127,	147) unless disturbed or problematic.
	_ayer (if observed)):		
Type:			<u> </u>	
	ches):		_	Hydric Soil Present? Yes No X
Remarks:				

Project/Site: Cumberland	County Property	Citv/C	county: Cumberlar	nd County	Sampling Date: 4/25/2018
Applicant/Owner: CWV, LLC;					Sampling Point: DP-15
Investigator(s): Hannah L.	Miller	Section	on Township Range		2-2-B
					Slope (%): 2-4%
Subregion (LRR or MLRA):n					
Soil Map Unit Name: Helena		t		NWI classifi	
		for this times of word N			
Are climatic / hydrologic condit				_ (If no, explain in F	
Are Vegetation, Soil		-			present? Yes X No No
Are Vegetation, Soil	, or Hydrology	naturally problema	atic? (If needed	l, explain any answe	ers in Remarks.)
SUMMARY OF FINDIN	GS – Attach site r	nap showing san	npling point locat	ions, transects	s, important features, etc.
Hydrophytic Vegetation Pres	ent? Yes X	No	Is the Sampled Area		
Hydric Soil Present?	Yes X		within a Wetland?	$_{ ext{Yes}}$ $ imes$	No
Wetland Hydrology Present?	Yes X	No			_
Remarks:					
Data point was taken	next to flag J-47.				
HYDROLOGY					_
Wetland Hydrology Indicat	ors:			Secondary Indic	ators (minimum of two required)
Primary Indicators (minimum	of one is required; che	ck all that apply)		Surface Soil	Cracks (B6)
Surface Water (A1)		True Aquatic Plants (B14)	Sparsely Ve	egetated Concave Surface (B8)
X High Water Table (A2)		_ Hydrogen Sulfide Od		X Drainage Pa	= : : : : : : : : : : : : : : : : : : :
Saturation (A3)		Oxidized Rhizospher			
Water Marks (B1)		Presence of Reduced	= -		Water Table (C2)
Sediment Deposits (B2)		Recent Iron Reduction		Crayfish Bu	
Drift Deposits (B3)		Thin Muck Surface (0		-	/isible on Aerial Imagery (C9)
Algal Mat or Crust (B4)		Other (Explain in Rer			Stressed Plants (D1)
Iron Deposits (B5)		_	,	X Geomorphic	
Inundation Visible on Ae	rial Imagery (B7)			Shallow Aqu	
X Water-Stained Leaves (F					aphic Relief (D4)
Aquatic Fauna (B13)	-,			FAC-Neutra	
Field Observations:				_	()
Surface Water Present?	Vec No X	C Depth (inches):			
Water Table Present?		Depth (inches): 6"			
Saturation Present? (includes capillary fringe)	Yes NO	C Depth (inches):	wetiand	i Hydrology Prese	nt? Yes X No
Describe Recorded Data (str	eam gauge, monitoring	well, aerial photos, pre	vious inspections), if a	vailable:	
,	0 0 7		,,,		
Damada					
Remarks:					

/EGETATION (Five Strata) – Use scientific na	mes of	plants.		Sampling Point: DP-15
	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 20'x20')		Species?	Status	Number of Dominant Species
1. Carpinus caroliniana	15%	<u>YES</u>	<u>FAC</u>	That Are OBL, FACW, or FAC: 6 (A)
2. Acer rubrum	15%	YES	FAC	Total Number of Deminant
3				Total Number of Dominant Species Across All Strata: 6 (B)
4				(Z)
5				Percent of Dominant Species That Are OBL_FACW_or FAC: 100% (A/B)
•				That Are OBL, FACW, or FAC: 100% (A/B)
6	30%	T-1-1-0		Prevalence Index worksheet:
		= Total Cove		Total % Cover of: Multiply by:
50% of total cover: <u>15%</u>	20% of	total cover:	6%	OBL species x 1 =
Sapling Stratum (Plot size: 20'x20'				FACW species x 2 =
1. Betula nigra	20%	YES	FACW	
2. Carpinus caroliniana	20%	YES	FAC	FAC species x 3 =
3				FACU species x 4 =
4				UPL species x 5 =
4				Column Totals: (A) (B)
5				
6	4001			Prevalence Index = B/A =
	40%	= Total Cove	er	Hydrophytic Vegetation Indicators:
50% of total cover: 20%	20% of	total cover:	8%	1 - Rapid Test for Hydrophytic Vegetation
Shrub Stratum (Plot size: 20'x20')		- · · · -		∠ 2 - Dominance Test is >50%
1				3 - Prevalence Index is ≤3.0 ¹
				4 - Morphological Adaptations ¹ (Provide supporting
2				data in Remarks or on a separate sheet)
3				Problematic Hydrophytic Vegetation ¹ (Explain)
4				
5				¹ Indicators of hydric soil and wetland hydrology must
6				be present, unless disturbed or problematic.
		= Total Cove	er	Definitions of Five Vegetation Strata:
50% of total cover:	20% of	total cover		_
Herb Stratum (Plot size: 20'x20')	2070 01	total oover.		Tree – Woody plants, excluding woody vines,
	15%	YES	FACW	approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).
· ·	1070		171011	(7.5 only of larger in diameter at broadt height (BBH).
2				Sapling – Woody plants, excluding woody vines,
3				approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.
4				
5				Shrub – Woody plants, excluding woody vines,
6				approximately 3 to 20 ft (1 to 6 m) in height.
7				Herb – All herbaceous (non-woody) plants, including
8				herbaceous vines, regardless of size, and woody
9				plants, except woody vines, less than approximately 3
				ft (1 m) in height.
10				Woody vine – All woody vines, regardless of height.
11				, , ,
	15%	= Total Cove	er	
50% of total cover:7.5	<u>%</u> 20% of	total cover:	3%	
Woody Vine Stratum (Plot size: 20'x20')		·-		
Vitis rinaria	15%	YES	FACW	
· <u>·</u>				
2				
3				
4				
5				I hadaa ahada
		= Total Cove	er	Hydrophytic Vegetation
				Present? Yes X No
50% of total cover:	20% of	total cover:		
Remarks: (Include photo numbers here or on a separate sl	neet.)			

SOIL Sampling Point: DP-15

Profile Desc	cription: (Describe	to the dep	th needed to docu	ment the	indicator	or confirm	the absenc	e of indica	ators.)	
Depth	Matrix			x Feature	s					
(inches)	Color (moist)	<u>%</u>	Color (moist)	%	Type'	Loc ²	<u>Texture</u>		Remarks	S
0-5	10YR 3/3	100					Sandy Lo	am		
5-18	10YR 7/2	90	7.5YR 5/6	10	С	PL_	Sandy Loa	ım		
	_									_
								-		
				-	· 					
	-									
	-				· -					
	oncentration, D=Dep	letion, RM	=Reduced Matrix, M	S=Masked	d Sand Gra	ains.			ining, M=Matri	
Hydric Soil									Problematic I	-
Histosol			Dark Surface	. ,					(A10) (MLRA	•
	pipedon (A2)		Polyvalue Be				148)		rie Redox (A16	6)
	istic (A3)		Thin Dark Su			47, 148)			147, 148) Elecalada (Cail	I- (F40)
	en Sulfide (A4) d Layers (A5)		Loamy GleyeDepleted Ma		(FZ)		_		Floodplain Soil 136, 147)	IS (F19)
	uck (A10) (LRR N)		Redox Dark		- 6)				ow Dark Surfa	ce (TF12)
	d Below Dark Surface	e (A11)	Depleted Da						olain in Remark	
	ark Surface (A12)	- (Redox Depre				_			-,
	Mucky Mineral (S1) (L	RR N,	Iron-Mangan			LRR N,				
MLR	A 147, 148)		MLRA 13	6)						
	Gleyed Matrix (S4)		Umbric Surfa						hydrophytic v	-
-	Redox (S5)		Piedmont Flo					-	Irology must be	
	d Matrix (S6)		Red Parent I	Material (F	(MLR	A 127, 147	7) u	nless distu	rbed or proble	matic.
	Layer (if observed):									
Type:										
Depth (in	ches):						Hydric So	il Present	? Yes X	No
Remarks:										

Project/Site: Cumberland Count	y Property	City/C	County: Cumberlar	nd County	Sampling Date: 4/25/2018
Applicant/Owner: CWV, LLC; c/o Jar			,		Sampling Point: <u>DP-15, UPL</u>
Investigator(s): Hannah L. Miller		Section	on, Township, Range: _	Tax Map #45-2	-2-B
Landform (hillslope, terrace, etc.): Hill	Islope/Toe of Slo	ope Local rel	ief (concave, convex, n	one):	Slope (%): 3-5%
Subregion (LRR or MLRA): n/a					
Soil Map Unit Name: Helena sandy				NWI classific	
Are climatic / hydrologic conditions on		this time of year? Y		(If no, explain in F	
Are Vegetation, Soil, or			bed? Are "Norm		present? Yes X No
Are Vegetation, Soil, or				, explain any answe	
, con, or	Trydrology	naturally problem	dio: (ii fiecaea	, explain any anowe	To in Normanio.
SUMMARY OF FINDINGS - A	Attach site ma	ap showing san	npling point locat	ions, transects	s, important features, etc.
Hydrophytic Vegetation Present?	Ves	No_X			
Hydric Soil Present?	Yes	No X	Is the Sampled Area within a Wetland?	l Yes	No <u>X</u>
Wetland Hydrology Present?	Yes	No X	Within a Wettana.	100	
Remarks:	100	110 <u>77 </u>			
Data point was taken adjacer	nt to flag J-47.				
LIVEROLOGY					_
HYDROLOGY				Cocondon India	atora (minimum of two required)
Wetland Hydrology Indicators:		all that amount o			ators (minimum of two required)
Primary Indicators (minimum of one is			(D4.4)	Surface Soil	
Surface Water (A1)		rue Aquatic Plants (getated Concave Surface (B8)
High Water Table (A2)		Hydrogen Sulfide Od		Drainage Pa	
Saturation (A3)			es on Living Roots (C3)		
Water Marks (B1) Sediment Deposits (B2)		Presence of Reduced	on in Tilled Soils (C6)	Crayfish Bur	Water Table (C2)
Orift Deposits (B3)		Thin Muck Surface (isible on Aerial Imagery (C9)
Algal Mat or Crust (B4)		Other (Explain in Rer			itressed Plants (D1)
Iron Deposits (B5)	_ `	Z (=xp.a to.			Position (D2)
Inundation Visible on Aerial Imag	ery (B7)			Shallow Aqu	
Water-Stained Leaves (B9)	, ,				aphic Relief (D4)
Aquatic Fauna (B13)				FAC-Neutral	• • •
Field Observations:					
Surface Water Present? Yes	$_{No}$ \times	Depth (inches):			
		Depth (inches):			
		Depth (inches):		Hydrology Presei	nt? Yes No X
(includes capillary fringe)					
Describe Recorded Data (stream gau	ge, monitoring we	ell, aerial photos, pre	evious inspections), if av	vailable:	
Remarks:					

/EGETATION (Five Strata) – Use scientific na	mes of	plants.		Sampling Point: DP-15, UPL
	Absolute	Dominant	Indicator	Dominance Test worksheet:
	% Cover	Species?	Status	Number of Dominant Species
1. Liriodendron tulipfera	20%	YES	FACU	That Are OBL, FACW, or FAC: 1 (A)
2. Fagus grandifolia	25%	YES	FACU	Total Number of Dominant
3				Species Across All Strata: 6 (B)
4				
5				Percent of Dominant Species That Are OBL, FACW, or FAC: 16% (A/B)
6.				That / He OBE, 1 / NOW, 01 1 / No.
	45%	= Total Cove	<u></u>	Prevalence Index worksheet:
50% of total cover: 22.5°				Total % Cover of: Multiply by:
	<u>70</u> 20% 01	total cover.		OBL species 0 x 1 = 0
Sapling Stratum (Plot size: 20'x20')	150/	VE0	FAC	FACW species <u>0</u> x 2 = <u>0</u>
		YES	FAC	FAC species <u>15</u> x 3 = <u>45</u>
2				FACU species 60 x 4 = 240
3				UPL species 25 x 5 = 125
4				Column Totals:100 (A) 410 (B)
5				
6				Prevalence Index = B/A = 4.10
	15%	= Total Cove	er	Hydrophytic Vegetation Indicators:
50% of total cover: 7.5%	, 20% of	total cover:	3%	1 - Rapid Test for Hydrophytic Vegetation
Shrub Stratum (Plot size: 20'x20')	_	-		2 - Dominance Test is >50%
1				3 - Prevalence Index is ≤3.0 ¹
2				4 - Morphological Adaptations ¹ (Provide supporting
				data in Remarks or on a separate sheet)
3				Problematic Hydrophytic Vegetation ¹ (Explain)
4				
5				¹ Indicators of hydric soil and wetland hydrology must
6				be present, unless disturbed or problematic.
		= Total Cove	er	Definitions of Five Vegetation Strata:
50% of total cover:	20% of	total cover:		Tree – Woody plants, excluding woody vines,
Herb Stratum (Plot size: 20'x20')				approximately 20 ft (6 m) or more in height and 3 in.
Polystichum acrostichoides	15%	YES	FACU	(7.6 cm) or larger in diameter at breast height (DBH).
2. Sanguinaria canadensis	10%	YES	UPL	Sapling – Woody plants, excluding woody vines,
3. Oxalis violacea	15%	YES	UPL	approximately 20 ft (6 m) or more in height and less
4.				than 3 in. (7.6 cm) DBH.
5				Shrub – Woody plants, excluding woody vines,
6				approximately 3 to 20 ft (1 to 6 m) in height.
7				Herb – All herbaceous (non-woody) plants, including
				herbaceous vines, regardless of size, and woody
8				plants, except woody vines, less than approximately 3
9				ft (1 m) in height.
10				Woody vine – All woody vines, regardless of height.
11				
	40%	= Total Cove	er	
50% of total cover: 20%	20% of	total cover:	8%	
Woody Vine Stratum (Plot size: 20'x20')				
1				
2				
3				
5		- Total Carr		Hydrophytic
		= Total Cove		Vegetation Present? Yes No X
50% of total cover:	20% of	total cover:		100
Remarks: (Include photo numbers here or on a separate sh	neet.)			

Sampling Point: DP-15, UPL

Depth	Matrix		Redox Features	-2 December
(inches)	Color (moist)	<u>%</u>	Color (moist) % Type ¹ Lo	C Texture Remarks
0-4	10YR 5/2			Sandy Loam_
4-18	10YR 6/3	100		Sandy Loam
				 -
-				
				
_				
		pletion, RM=R	educed Matrix, MS=Masked Sand Grains.	² Location: PL=Pore Lining, M=Matrix.
dric Soil I	ndicators:			Indicators for Problematic Hydric Soils ³ :
_ Histosol			Dark Surface (S7)	2 cm Muck (A10) (MLRA 147)
	ipedon (A2)		Polyvalue Below Surface (S8) (MLRA	
_ Black His			Thin Dark Surface (S9) (MLRA 147, 1	
	n Sulfide (A4) Layers (A5)		Loamy Gleyed Matrix (F2)Depleted Matrix (F3)	Piedmont Floodplain Soils (F19) (MLRA 136, 147)
	ck (A10) (LRR N)		Redox Dark Surface (F6)	Very Shallow Dark Surface (TF12)
	Below Dark Surfa	ce (A11)	Depleted Dark Surface (F7)	Other (Explain in Remarks)
	rk Surface (A12)	,	Redox Depressions (F8)	
	ucky Mineral (S1)	(LRR N,	Iron-Manganese Masses (F12) (LRR	N,
MLRA	147, 148)		MLRA 136)	
	leyed Matrix (S4)		Umbric Surface (F13) (MLRA 136, 12	
	edox (S5)		Piedmont Floodplain Soils (F19) (MLI	
	Matrix (S6)		Red Parent Material (F21) (MLRA 12	7, 147) unless disturbed or problematic.
	ayer (if observed):		
Type:			<u> </u>	
			<u> </u>	Hydric Soil Present? Yes No X
	:hes):			
Depth (inc	:hes):			
Depth (inc	hes):			
Depth (inc	:hes):			
Depth (inc	:hes):			
Depth (inc	hes):			
Depth (inc	ches):			
Depth (inc	ches):			
Depth (inc	hes):			
Depth (inc	hes):			
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Depth (inc	ches):			
Depth (inc	ches):			
	ehes):			
Depth (inc	ehes):			
Depth (inc	ehes):			
Depth (inc	ehes):			
Depth (inc	ehes):			
Depth (inc	ehes):			

Project/Site: Cumberland County Property City/	/County: Cumberland County Sampling Date: 4/25/2018
Applicant/Owner: CWV, LLC; c/o James H. Martin	State: VA Sampling Point: DP-16
Investigator(s): Hannah L. Miller Sec	tion, Township, Range: Tax Map # 45-2-2-B
Landform (hillslope terrace etc.) Floodplain Local re	elief (concave, convex, none): Slope (%):2-4%
	Long: -78.110749076 Datum:
Soil Map Unit Name: Helena sandy loam	NWI classification: PFO
Are climatic / hydrologic conditions on the site typical for this time of year?	
Are Vegetation, Soil, or Hydrology significantly distu	
Are Vegetation, Soil, or Hydrology naturally distributed as a second	
naturally problem	natio: (ii needed, explain any answers in Nemarks.)
SUMMARY OF FINDINGS – Attach site map showing sa	mpling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes X No	Is the Sampled Area
Hydric Soil Present? Yes X No	within a Wetland? Yes X No
Wetland Hydrology Present? Yes X No	
Remarks:	
Data point was taken post to flor 1.50	
Data point was taken next to flag J-52.	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) True Aquatic Plants	Sparsely Vegetated Concave Surface (B8)
1	eres on Living Roots (C3) X Moss Trim Lines (B16)
Water Marks (B1) Presence of Reduce	
Sediment Deposits (B2) Recent Iron Reduct	ion in Tilled Soils (C6) Crayfish Burrows (C8)
Drift Deposits (B3) Thin Muck Surface	(C7) Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4) Other (Explain in Re	emarks) Stunted or Stressed Plants (D1)
Iron Deposits (B5)	X Geomorphic Position (D2)
Inundation Visible on Aerial Imagery (B7)	Shallow Aquitard (D3)
X Water-Stained Leaves (B9)	Microtopographic Relief (D4)
Aquatic Fauna (B13)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes X No Depth (inches):)"
Water Table Present? Yes X No Depth (inches): 4	<u>." </u>
Saturation Present? Yes X No Depth (inches): 6	Wetland Hydrology Present? Yes X No
(includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pr	revious inspections), if available:
Remarks:	

/EGETATION (Five Strata) – Use scientific na	mes of	olants.		Sampling Point: DP-16
· · · · · · · · · · · · · · · · · · ·	Absolute	Dominant		Dominance Test worksheet:
Tree Stratum (Plot size: 20'x20')		Species?	Status	Number of Dominant Species _
1. Betula nigra	15%	YES	FAC	That Are OBL, FACW, or FAC: 7 (A)
2. Liquidambar styraciflua	10%	YES	FAC	Total Number of Deminent
3				Total Number of Dominant Species Across All Strata: 7 (B)
4				
5				Percent of Dominant Species That Are OBL FACW or FAC: 100% (A/B)
				That Are OBL, FACW, or FAC: 100% (A/B)
6	25%	Tatal Cau		Prevalence Index worksheet:
		= Total Cove		Total % Cover of: Multiply by:
50% of total cover: 12.5	$\frac{\%}{}$ 20% of	total cover:	5%	OBL species x 1 =
Sapling Stratum (Plot size: 20'x20')				FACW species x 2 =
1. Betula nigra	10%	YES	FACW	
2. Acer rubrum	20%	YES	FAC	FAC species x 3 =
3. Carpinus caroliniana	15%	YES	FAC	FACU species x 4 =
				UPL species x 5 =
·				Column Totals: (A) (B)
5				
6	450/			Prevalence Index = B/A =
	45%	= Total Cove	er	Hydrophytic Vegetation Indicators:
50% of total cover: 22.5°	<u>%</u> 20% of	total cover:	9%	1 - Rapid Test for Hydrophytic Vegetation
Shrub Stratum (Plot size: 20'x20'		-		✓ 2 - Dominance Test is >50%
1				3 - Prevalence Index is ≤3.0 ¹
				4 - Morphological Adaptations ¹ (Provide supporting
2				data in Remarks or on a separate sheet)
3				Problematic Hydrophytic Vegetation ¹ (Explain)
4				
5				¹ Indicators of hydric soil and wetland hydrology must
6				be present, unless disturbed or problematic.
		= Total Cove	er	Definitions of Five Vegetation Strata:
50% of total cover:	20% of	total cover:		
Herb Stratum (Plot size: 20'x20')		10101 00101.		Tree – Woody plants, excluding woody vines,
Delta a describada a	15%	YES	OBL	approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).
				(
2				Sapling – Woody plants, excluding woody vines,
3				approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.
4				than o m. (7.0 om) BBH.
5				Shrub – Woody plants, excluding woody vines,
6				approximately 3 to 20 ft (1 to 6 m) in height.
7				Herb – All herbaceous (non-woody) plants, including
8				herbaceous vines, regardless of size, and woody
9				plants, except woody vines, less than approximately 3
				ft (1 m) in height.
10				Woody vine – All woody vines, regardless of height.
11	150/-			
		= Total Cove		
50% of total cover:7.5	$rac{\%}{}$ 20% of	total cover:	3%	
Woody Vine Stratum (Plot size: 20'x20')				
1. Vitis riparia	15%	YES	FACW	
2				
3				
4				
5				Hydrophytic
	15%	= Total Cove	er	Vegetation
50% of total cover: 7.5%				Present? Yes X No
Remarks: (Include photo numbers here or on a separate sl				<u>l</u>
Remarks. (include prioto numbers here of on a separate si	ieei.)			

SOIL Sampling Point: DP-16

Profile Desc	ription: (Describe	to the dep	th needed to docur	nent the i	ndicator	or confirm	the absence of indicators.)
Depth	Matrix		Redo	x Features	3		
(inches)	Color (moist)	<u>%</u>	Color (moist)	%	Type ¹	Loc ²	Texture Remarks
0-5	10YR 3/3	100					Sandy Loam
5-18	10YR 7/2	85	7.5YR 5/6	15	С	PL	Sandy Loam
		· ——					
	-						
		· ——					
1 _{Turnou} C. C.		lation DM	Doduced Metrix MS	- Maakad	Cond Cr		21 costions DI Doro Lining M Motris
Hydric Soil		letion, Rivi	=Reduced Matrix, MS	s=iviasked	Sand Gra	ains.	² Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils ³ :
-			Davis Courters	(07)			
Histosol	oipedon (A2)		Dark Surface		oo (CO) /N /	II D A 447	2 cm Muck (A10) (MLRA 147)
			Polyvalue Be Thin Dark Su				148) Coast Prairie Redox (A16) (MLRA 147, 148)
Black Hi	en Sulfide (A4)		Loamy Gleye			47, 140)	Piedmont Floodplain Soils (F19)
	d Layers (A5)		Z Depleted Mar	,	1 2)		(MLRA 136, 147)
	ick (A10) (LRR N)		Redox Dark	. ,	·6)		Very Shallow Dark Surface (TF12)
	d Below Dark Surface	e (A11)	Depleted Dar	•	,		Other (Explain in Remarks)
	ark Surface (A12)	- ()	Redox Depre				
	lucky Mineral (S1) (L	RR N,	Iron-Mangan			_RR N,	
MLRA	A 147, 148)		MLRA 13	6)			
	Bleyed Matrix (S4)		Umbric Surfa				³ Indicators of hydrophytic vegetation and
	tedox (S5)		Piedmont Flo				
	Matrix (S6)		Red Parent N	/laterial (F	21) (MLR .	A 127, 147	7) unless disturbed or problematic.
Restrictive I	_ayer (if observed):						
Type:							
Depth (inc	ches):						Hydric Soil Present? Yes X No No
Remarks:							

Project/Site: Cumberland County	Property	City/Co	unty: Cumberlar	nd County	Sampling Date: 4/25/2018
Applicant/Owner: CWV, LLC; c/o Jame	s H. Martin			State: VA	Sampling Point: DP-16, UPL
Investigator(s): Hannah L. Miller		Section	n, Township, Range:	Tax Map #45-2	-2-B
Landform (hillslope, terrace, etc.): Hillslo	ppe	Local relie	f (concave, convex, n	none):	Slope (%): 2-4%
Subregion (LRR or MLRA): n/a		7.554727859	Long: -	78.110749076	Datum:
Soil Map Unit Name: Helena sandy loa				NWI classific	
Are climatic / hydrologic conditions on the		time of vear? Ye		 _ (If no, explain in F	
Are Vegetation, Soil, or Hy			ed? Are "Norm		present? Yes X No
Are Vegetation, Soil, or Hy				I, explain any answe	
·	<u> </u>		`		,
SUMMARY OF FINDINGS – Att	ach site map s	showing sam	oling point locat	ions, transects	, important features, etc.
		V			
Hydrophytic Vegetation Present?	Yes No		Is the Sampled Area	a Vaa	No <u>X</u>
Hydric Soil Present? Wetland Hydrology Present?	Yes No	- X	within a Wetland?	res	No
Remarks:	165 100				
ixemarks.					
Data point was taken adjacent t	o flag J-52.				
HYDROLOGY					
Wetland Hydrology Indicators:					ators (minimum of two required)
Primary Indicators (minimum of one is re	quired; check all the	hat apply)		Surface Soil	
Surface Water (A1)		Aquatic Plants (B			getated Concave Surface (B8)
High Water Table (A2)		ogen Sulfide Odor		Drainage Pa	
Saturation (A3)			s on Living Roots (C3		
Water Marks (B1)		ence of Reduced			Water Table (C2)
Sediment Deposits (B2)			in Tilled Soils (C6)	Crayfish Bur	
Drift Deposits (B3)		Muck Surface (C7			isible on Aerial Imagery (C9)
Algal Mat or Crust (B4)	Othe	er (Explain in Rema	arks)		Stressed Plants (D1)
Iron Deposits (B5)	· /DZ\				Position (D2)
Inundation Visible on Aerial Imagery	(D/)			Shallow Aqu	aphic Relief (D4)
Water-Stained Leaves (B9) Aquatic Fauna (B13)				FAC-Neutral	. , ,
Field Observations:			<u> </u>	TAC-Neutra	
	NoX_ Dep	oth (inches):			
	No <u>X</u> Dep No <u>X</u> Dep				
	No <u> X </u> Dep No <u> X </u> Dep			l Hydrology Presei	nt2 Vac No Y
(includes capillary fringe)	No Deb	our (inches)	welland	i nyurology Fresei	nt? Yes No <u>X</u>
Describe Recorded Data (stream gauge	monitoring well, a	erial photos, previ	ious inspections), if a	vailable:	
Remarks:					

/EGETATION (Five Strata) – Use scientific na	mes of	plants.		Sampling Point: DP-16, UPL
201.001	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 20'x20')	% Cover	Species?	Status	Number of Dominant Species
1. Liriodendron tulipfera	20%	YES	FACU	That Are OBL, FACW, or FAC: 1 (A)
2. Fagus grandifolia	10%	YES	FACU	Total Number of Dominant
3				Species Across All Strata: 6 (B)
4				Barrant of Barring of Canada
5				Percent of Dominant Species That Are OBL, FACW, or FAC: 16% (A/B)
6.				
	30%	= Total Cov	er	Prevalence Index worksheet:
50% of total cover:15%				Total % Cover of: Multiply by:
Sapling Stratum (Plot size: 20'x20')	20% 01	iolai cover.		OBL species 0 x 1 = 0
4. Facus and diffelia	200/	VEC	EACH	FACW species <u>0</u> x 2 = <u>0</u>
		YES		FAC species 10 x 3 = 30
2				FACU species
3				UPL species x 5 = 100
4				Column Totals:100 (A)410 (B)
5				
6				Prevalence Index = B/A = 4.10
	20%	= Total Cov	er	Hydrophytic Vegetation Indicators:
50% of total cover: _ 10%	20% of	total cover:	4%	1 - Rapid Test for Hydrophytic Vegetation
Shrub Stratum (Plot size: 20'x20')				2 - Dominance Test is >50%
1				3 - Prevalence Index is ≤3.0 ¹
				4 - Morphological Adaptations ¹ (Provide supporting
2				data in Remarks or on a separate sheet)
3				Problematic Hydrophytic Vegetation ¹ (Explain)
4				
5				¹ Indicators of hydric soil and wetland hydrology must
6				be present, unless disturbed or problematic.
		= Total Cov	er	Definitions of Five Vegetation Strata:
50% of total cover:	20% of	total cover:		Tree – Woody plants, excluding woody vines,
Herb Stratum (Plot size: 20'x20')				approximately 20 ft (6 m) or more in height and 3 in.
Polystichum acrostichoides	20%	YES	FACU	(7.6 cm) or larger in diameter at breast height (DBH).
2. Oxalis violacea	20%	YES	UPL	Sapling – Woody plants, excluding woody vines,
3.				approximately 20 ft (6 m) or more in height and less
4.				than 3 in. (7.6 cm) DBH.
				Shrub – Woody plants, excluding woody vines,
				approximately 3 to 20 ft (1 to 6 m) in height.
6				
7				Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody
8				plants, except woody vines, less than approximately 3
9				ft (1 m) in height.
10				Woody vine – All woody vines, regardless of height.
11				Trocay time 7 in woody times, regardless of meight
	40%	= Total Cov	er	
50% of total cover: 20%	20% of	total cover:	8%	
Woody Vine Stratum (Plot size: 20'x20')		•		
1. Smilax rotundifolia	10%	YES	FAC	
3				
4				
5				Hydrophytic
	10%	= Total Cov	er	Vegetation Present? Yes No
50% of total cover: 5%	20% of	total cover:	2%	Present? Yes No _ ^_
Remarks: (Include photo numbers here or on a separate sh	neet.)			I .
•	•			

Sampling Point: DP-16, UPL

Depth (i.e.)	Matrix		Redox Features	- Tooloo Barada
(inches)	Color (moist)	<u>%</u>	Color (moist) % Type ¹ Loc ²	
0-4	10YR 4/3			Sandy Loam_
4-10	10YR 6/3	100		Sandy Loam
10-18	10YR 6/6	100		Sandy C. Loam
		<u> </u>		
	ncentration D-De	nletion RM-F	Reduced Matrix, MS=Masked Sand Grains.	² Location: PL=Pore Lining, M=Matrix.
ydric Soil I		epietion, Kivi=K	Reduced Matrix, MS=Masked Sand Grains.	Indicators for Problematic Hydric Soils ³ :
Histosol			Dark Surface (S7)	2 cm Muck (A10) (MLRA 147)
	ipedon (A2)		Polyvalue Below Surface (S8) (MLRA 14	
Black His			Thin Dark Surface (S9) (MLRA 147, 148	· · · · · · · · · · · · · · · · · · ·
	n Sulfide (A4)		Loamy Gleyed Matrix (F2)	Piedmont Floodplain Soils (F19)
	Layers (A5)		Depleted Matrix (F3)	(MLRA 136, 147)
	ck (A10) (LRR N)	200 (111)	Redox Dark Surface (F6)	<pre> Very Shallow Dark Surface (TF12) Other (Explain in Remarks)</pre>
	l Below Dark Surfa irk Surface (A12)	ace (ATT)	Depleted Dark Surface (F7)Redox Depressions (F8)	Other (Explain in Remarks)
	lucky Mineral (S1)	(LRR N.	Iron-Manganese Masses (F12) (LRR N,	
-	147, 148)	(,	MLRA 136)	
	leyed Matrix (S4)		Umbric Surface (F13) (MLRA 136, 122)	³ Indicators of hydrophytic vegetation and
	edox (S5)		Piedmont Floodplain Soils (F19) (MLRA	
	Matrix (S6)		Red Parent Material (F21) (MLRA 127, 1	47) unless disturbed or problematic.
	ayer (if observed	i):		
Type:			<u> </u>	
	hac).		<u> </u>	Hydric Soil Present? Yes No X
Depth (inc	, iies)			
	nies).			
	nes).			
	nies).			
	nes).			
Depth (inc	nes).			
	ines).			

Project/Site: Cumberland	Coun	ty P	ropert	y City/0	County: (Cumberlan	d County	Sampling Date:	4/25/2018
Applicant/Owner: CWV, LLC; c	o James	H. Ma	artin					Sampling Poin	
Investigator(s): Hannah L.	Miller			Secti	ion. Towns	hip. Range:			
Landform (hillslope, terrace, et									e (%): 0-3%
Subregion (LRR or MLRA):n									
Soil Map Unit Name: Chewa							NWI classifi		
Are climatic / hydrologic condit							(If no, explain in F		
Are Vegetation, Soil								present? Yes _>	< No
Are Vegetation, Soil		-		= -			explain any answe		NO
Are vegetation, 30ii	, 0	TTIYU	lology _	naturally problem	iatio:	(II Heeded,	explain any answe	ers in Nemarks.)	
SUMMARY OF FINDIN	GS – A	Attac	ch site	map showing san	npling p	oint locati	ons, transects	s, important fe	atures, etc.
Hydrophytic Vegetation Pres	ent?	,	Yes <u></u> ≻	< No	Is the Sa	ampled Area			
Hydric Soil Present?		,	Yes <u>≻</u>	<u> </u>		Wetland?	$_{Yes}$ $ imes$	No	-
Wetland Hydrology Present?		`	Yes <u>≻</u>	<u> </u>					
Remarks:									
Data point was taken	acyt to	floo	1.0						
Data point was taken i	iext to	iiag	L-9.						
HYDROLOGY									
Wetland Hydrology Indicate	ors:						Secondary Indic	ators (minimum of	two required)
Primary Indicators (minimum		is rea	uired: ch	neck all that apply)				Cracks (B6)	
X Surface Water (A1)				True Aquatic Plants	(B14)			getated Concave S	Surface (B8)
X High Water Table (A2)				Hydrogen Sulfide Oc			X Drainage Pa	-	(= 0)
X Saturation (A3)				Oxidized Rhizospher		na Roots (C3)			
Water Marks (B1)				Presence of Reduce				Water Table (C2)	
Sediment Deposits (B2)				Recent Iron Reduction			X Crayfish Bu		
Drift Deposits (B3)				Thin Muck Surface (, ,	-	/isible on Aerial Ima	agery (C9)
Algal Mat or Crust (B4)				Other (Explain in Re				Stressed Plants (D1	
Iron Deposits (B5)							X Geomorphic		
Inundation Visible on Ae	rial Imaç	gery (B7)				Shallow Aqu	uitard (D3)	
X Water-Stained Leaves (E	39)							aphic Relief (D4)	
Aquatic Fauna (B13)							FAC-Neutra		
Field Observations:									
Surface Water Present?	Yes	×	No	Depth (inches): 0'	"				
Water Table Present?				Depth (inches): 6"					
Saturation Present?				Depth (inches): 8"		Wetland	Hydrology Prese	nt? Yes X	No
(includes capillary fringe)				annall and alabatan an			-9-61-		
Describe Recorded Data (stre	eam gau	uge, n	nonitorir	ng well, aerial photos, pre	evious insp	ections), if av	allable:		ļ
Remarks:									

/EGETATION (Five Strata) – Use scientific na	ames of	plants.		Sampling Point: DP-17
001-001	Absolute	Dominant		Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size: _20'x20')		Species?		Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
1				mat Ale OBE, I AOW, OI I AO (A)
2				Total Number of Dominant Species Across All Strata: 2 (B)
3				Species Across All Strata: 2 (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 100% (A/B)
6				Prevalence Index worksheet:
		= Total Cov	er	Total % Cover of: Multiply by:
50% of total cover:	20% of	total cover:		OBL species x 1 =
Sapling Stratum (Plot size: 20'x20'				FACW species x 2 =
1. Carpinus caroliniana	10%	YES	FAC	
2				FACULARISIS X 3 =
3				FACU species x 4 =
4				UPL species x 5 =
5				Column Totals: (A) (B)
6.				Prevalence Index = B/A =
<u>. </u>		= Total Cov	er	Hydrophytic Vegetation Indicators:
E 0/				1 - Rapid Test for Hydrophytic Vegetation
50% of total cover: <u>5%</u>	20% of	total cover:	270	2 - Dominance Test is >50%
Shrub Stratum (Plot size: 20'x20')				
1				3 - Prevalence Index is ≤3.0 ¹
2				4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
3				Problematic Hydrophytic Vegetation¹ (Explain)
4	_			1 Toblematic Trydrophytic Vegetation (Explain)
5				¹ Indicators of hydric soil and wetland hydrology must
6				be present, unless disturbed or problematic.
		= Total Cov	er	Definitions of Five Vegetation Strata:
50% of total cover:	20% of	total cover:		_
Herb Stratum (Plot size: 20'x20')				Tree – Woody plants, excluding woody vines,
1. Juncus effusus	90%	YES	FACW	approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).
	-			
_				Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less
3				than 3 in. (7.6 cm) DBH.
4				
5				Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.
6				approximately a to 20 it (1 to 6 iii) iii neighin
7				Herb – All herbaceous (non-woody) plants, including
8				herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3
9				ft (1 m) in height.
10				Woody vine – All woody vines, regardless of height.
11				Woody vine - All woody vines, regardless of neight.
	90%	= Total Cov	er	
50% of total cover: 45	% 20% of	total cover:	18%	
Woody Vine Stratum (Plot size: 20'x20')				
1				
3				
4				
5				Hydrophytic
		= Total Cov	er	Vegetation Present? Yes X No
50% of total cover:	20% of	total cover:		Present? Yes _ ^ No
Remarks: (Include photo numbers here or on a separate s	sheet.)			

SOIL Sampling Point: DP-17

(inches)	Matrix			x Features			
	Color (moist)	%	Color (moist)	% Type	1 Loc ²	Texture	Remarks
0-5	10YR 3/3	100		·		Sandy Loam	
5-18	10YR 7/1	80	7.5YR 5/4	20 C	<u>PL</u>	Sandy Loam	
	-						
			-				
			-				
1- 0.0						21 11 12 12	
Hydric Soil I		pletion, RM	=Reduced Matrix, MS	S=Masked Sand	Grains.	² Location: PL=Pore L	Lining, M=Matrix. Problematic Hydric Soils ³ :
-			Dork Surface	(07)			
Histosol	ipedon (A2)		Dark Surface	elow Surface (S8)	(MI DA 147		k (A10) (MLRA 147) irie Redox (A16)
Black His				urface (S9) (MLR			147, 148)
	n Sulfide (A4)			ed Matrix (F2)	1 147, 140)		Floodplain Soils (F19)
	Layers (A5)		X Depleted Ma	, ,			136, 147)
	ck (A10) (LRR N)		Redox Dark				low Dark Surface (TF12)
	Below Dark Surfa	ce (A11)		rk Surface (F7)			olain in Remarks)
	ark Surface (A12)		Redox Depre	essions (F8)			
	lucky Mineral (S1)	(LRR N,		ese Masses (F12) (LRR N,		
	147, 148)		MLRA 13	•			
	leyed Matrix (S4)			ace (F13) (MLRA			f hydrophytic vegetation and
	edox (S5)			oodplain Soils (F1			drology must be present,
	Matrix (S6)		Red Parent N	Material (F21) (MI	_RA 127, 147	unless disti	urbed or problematic.
	ayer (if observed):					
Type:							Y
	ches):					Hydric Soil Present	? Yes <u>X</u> No
Remarks:							

Project/Site: Cumberland Cour	nty Property	City/County: Cumb	perland County	Sampling Date: 4/25/2018
Applicant/Owner: CWV, LLC; c/o Ja				Sampling Point: <u>DP-17, UPL</u>
Investigator(s): Hannah L. Miller		Section, Township, Ra		 ?-2-B
Landform (hillslope, terrace, etc.): Hi				
Subregion (LRR or MLRA): n/a				
Soil Map Unit Name: Chewacla and			NWI classific	
Are climatic / hydrologic conditions on		of year? Yes X No	(If no, explain in R	
Are Vegetation, Soil, c				present? Yes X No
Are Vegetation, Soil, c			needed, explain any answe	
, co, co,	<u></u>	, p. 62.16.11.41.11	ocaca, explain any allene	
SUMMARY OF FINDINGS -	Attach site map shov	ving sampling point	locations, transects	, important features, etc.
Hydrophytic Vegetation Present?	Yes No_X	la tha Canada	1 4	
Hydric Soil Present?	Yes No_X		d Area and? Yes	No <u>X</u>
Wetland Hydrology Present?	Yes No X			
Remarks:				
Data point was taken adjace	int to flag L-9.			
HYDROLOGY				
Wetland Hydrology Indicators:			Secondary Indica	ators (minimum of two required)
Primary Indicators (minimum of one	is required; check all that ar	nnly)	Surface Soil	
Surface Water (A1)	-	itic Plants (B14)		getated Concave Surface (B8)
High Water Table (A2)		Sulfide Odor (C1)	Drainage Pa	
Saturation (A3)	· · · · ·	Rhizospheres on Living Roc		
Water Marks (B1)		of Reduced Iron (C4)		Water Table (C2)
Sediment Deposits (B2)		n Reduction in Tilled Soils		
Drift Deposits (B3)		Surface (C7)		sible on Aerial Imagery (C9)
Algal Mat or Crust (B4)		olain in Remarks)		tressed Plants (D1)
Iron Deposits (B5)				Position (D2)
Inundation Visible on Aerial Ima	gery (B7)		Shallow Aqui	itard (D3)
Water-Stained Leaves (B9)			Microtopogra	aphic Relief (D4)
Aquatic Fauna (B13)			FAC-Neutral	Test (D5)
Field Observations:				
	No X Depth (in			
	No X Depth (in	T		
Saturation Present? Yes	No X Depth (in	ches): W	etland Hydrology Presen	nt? Yes No <u>X</u>
(includes capillary fringe) Describe Recorded Data (stream ga	unge monitoring well aerial	nhotos previous inspection	us) if available:	
Describe Neseraea Data (etream ga	ago, mormornig won, aonar p	priotos, proviodo mopositori	o), ii availabio.	
Remarks:				
Nomano.				

/EGETATION (Five Strata) – Use scientific na	mes of	plants.		Sampling Point: DP-17, UPL
201/201	Absolute	Dominant I		Dominance Test worksheet:
Tree Stratum (Plot size: 20'x20')		Species?		Number of Dominant Species
1. Liriodendron tulipfera	30%	YES	FACU	That Are OBL, FACW, or FAC: 1 (A)
2. Fagus grandifolia	35%	YES	FACU	Total Number of Dominant
3				Species Across All Strata: 4 (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 25% (A/B)
6				Prevalence Index worksheet:
		= Total Cove		Total % Cover of: Multiply by:
50% of total cover: 32.5	<u>%</u> 20% of	total cover:_	13%	OBL species 0 x 1 = 0
Sapling Stratum (Plot size: 20'x20'				FACW species 0 x 2 = 0
1. Ilex opaca	25%	YES	FAC	FAC species <u>25</u> x 3 = <u>75</u>
2				FACU species 75 x 4 = 300
3				UPL species 0 x 5 = 0
4				Column Totals: 100 (A) 375 (B)
5				
6				Prevalence Index = B/A = 3.75
	25%	= Total Cove	r	Hydrophytic Vegetation Indicators:
50% of total cover:12.5	5% _{20% of}	total cover:	5%	1 - Rapid Test for Hydrophytic Vegetation
Shrub Stratum (Plot size: 20'x20')				2 - Dominance Test is >50%
1				3 - Prevalence Index is ≤3.0 ¹
2				4 - Morphological Adaptations ¹ (Provide supporting
3				data in Remarks or on a separate sheet)
4				Problematic Hydrophytic Vegetation ¹ (Explain)
5				¹ Indicators of hydric soil and wetland hydrology must
6		= Total Cove		be present, unless disturbed or problematic.
				Definitions of Five Vegetation Strata:
50% of total cover:	20% of	total cover:_		Tree – Woody plants, excluding woody vines,
Herb Stratum (Plot size: 20'x20')				approximately 20 ft (6 m) or more in height and 3 in.
Polystichum acrostichoides	10%	YES	FACU	(7.6 cm) or larger in diameter at breast height (DBH).
2				Sapling – Woody plants, excluding woody vines,
3				approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.
4				than 3 m. (7.0 cm) DDM.
5				Shrub – Woody plants, excluding woody vines,
6				approximately 3 to 20 ft (1 to 6 m) in height.
7				Herb – All herbaceous (non-woody) plants, including
8				herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3
9				ft (1 m) in height.
10				Woody vine – All woody vines, regardless of height.
11				Woody vine - All woody vines, regardless of neight.
	10%	= Total Cove	r	
50% of total cover: _5%	20% of	total cover:	2%	
Woody Vine Stratum (Plot size: 20'x20')		_		
1				
2				
3				
4 5.				
o		= Total Cove		Hydrophytic
				Vegetation Present? Yes No
50% of total cover:		total cover:_		
Remarks: (Include photo numbers here or on a separate si	heet.)			

Sampling Point: DP-17, UPL

Depth	Matrix		Redox Features	
(inches)	Color (moist)	%	Color (moist) % Type ¹ L	Loc ² Texture Remarks
0-4	10YR 5/3	100		Sandy Loam
4-18	10YR 5/6	100		Light Sandy C. Loam
	_			
		pletion, RM=Re	educed Matrix, MS=Masked Sand Grains	
Hydric Soil				Indicators for Problematic Hydric Soils ³
Histosol			Dark Surface (S7)	2 cm Muck (A10) (MLRA 147)
	pipedon (A2)		Polyvalue Below Surface (S8) (MLR	· · · · · · · · · · · · · · · · · · ·
	istic (A3)		Thin Dark Surface (S9) (MLRA 147,	
	en Sulfide (A4) d Layers (A5)		Loamy Gleyed Matrix (F2)Depleted Matrix (F3)	Piedmont Floodplain Soils (F19) (MLRA 136, 147)
	uck (A10) (LRR N)		Redox Dark Surface (F6)	Very Shallow Dark Surface (TF12)
	d Below Dark Surfa	ce (A11)	Depleted Dark Surface (F7)	Other (Explain in Remarks)
	ark Surface (A12)	,	Redox Depressions (F8)	
Sandy M	Mucky Mineral (S1)	(LRR N,	Iron-Manganese Masses (F12) (LRI	R N,
MLRA	A 147, 148)		MLRA 136)	
	Sleyed Matrix (S4)		Umbric Surface (F13) (MLRA 136, 1	
	Redox (S5)		Piedmont Floodplain Soils (F19) (MI	
	Matrix (S6)		Red Parent Material (F21) (MLRA 1	27, 147) unless disturbed or problematic.
	Layer (if observed)):		
Type:			_	
Depth (in	ches):			Hydric Soil Present? Yes No X
Remarks:				

Project/Site: Cumberland	County Property	Citv/C	ounty: Cumberlan	d County	Sampling Date: 4/25/2018
Applicant/Owner: CWV, LLC; of					Sampling Point: DP-18
Investigator(s): Hannah L.		Section	on Township Range		
					Slope (%): 2-4%
					Datum:
Soil Map Unit Name:				NWI classific	
Are climatic / hydrologic condit				(If no, explain in F	
Are Vegetation, Soil					present? Yes X No
Are Vegetation, Soil				explain any answe	
Are vegetation, 50ii	, or Hydrology	naturally problems	alic? (II needed,	explain any answe	ers in Remarks.)
SUMMARY OF FINDIN	GS – Attach site	map showing sam	pling point locati	ons, transects	s, important features, etc.
Hydrophytic Vegetation Pres	ent? Yes X	No	Is the Sampled Area		
Hydric Soil Present?	Yes X		within a Wetland?	$_{Yes}$ $ imes$	No
Wetland Hydrology Present?	Yes X	No			
Remarks:					
Data naint was taken	and to flow IC OO				
Data point was taken	next to flag K-80.				
HYDROLOGY					
Wetland Hydrology Indicate	ors.			Secondary Indica	ators (minimum of two required)
Primary Indicators (minimum		ack all that annly)		-	Cracks (B6)
Surface Water (A1)		_ True Aquatic Plants (P14)		getated Concave Surface (B8)
Surface Water (A1)X High Water Table (A2)		_ Hydrogen Sulfide Od		Sparsery ve	=
Saturation (A3)		_ Oxidized Rhizosphere			
Water Marks (B1)		_ Presence of Reduced			Water Table (C2)
Sediment Deposits (B2)		Recent Iron Reductio		Crayfish Bu	
Drift Deposits (B3)		Thin Muck Surface (C		-	/isible on Aerial Imagery (C9)
Algal Mat or Crust (B4)		_ Other (Explain in Rer			Stressed Plants (D1)
Iron Deposits (B5)	_	_ Outor (Explain in Nor	namoj	X Geomorphic	
Inundation Visible on Ae	rial Imagery (B7)			Shallow Aqu	
X Water-Stained Leaves (F					aphic Relief (D4)
Aquatic Fauna (B13)	20)			FAC-Neutra	
Field Observations:					1 1001 (20)
Surface Water Present?	Ves No X	Depth (inches):			
Water Table Present?		Depth (inches): 4"			
Saturation Present?		Depth (inches):		Hydrology Droce	nt? Yes X No
(includes capillary fringe)	res No	Depth (inches):	wetiand	nydrology Prese	nt? Yes X No
Describe Recorded Data (str	eam gauge, monitoring	well, aerial photos, pre	vious inspections), if av	ailable:	
Remarks:					

/EGETATION (Five Strata) – Use scientific na	mes of	plants.		Sampling Point: DP-18
201.001	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 20'x20')		Species?		Number of Dominant Species
1. Carpinus caroliniana		YES_		That Are OBL, FACW, or FAC: 6 (A)
2				Total Number of Dominant
3				Species Across All Strata: 6 (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 100% (A/B)
6				Prevalence Index worksheet:
		= Total Cove		Total % Cover of: Multiply by:
50% of total cover: 5%	20% of	total cover:	2%	OBL species x 1 =
Sapling Stratum (Plot size: 20'x20'	050/	VEO		FACW species x 2 =
1. Carpinus caroliniana	25%	YES	FACW	FAC species x 3 =
2. Ilex opaca		YES	FAC	FACU species x 4 =
3				UPL species x 5 =
4				Column Totals: (A) (B)
5				
6	400/			Prevalence Index = B/A =
		= Total Cove		Hydrophytic Vegetation Indicators:
50% of total cover: 20%	20% of	total cover:	8%	1 - Rapid Test for Hydrophytic Vegetation
Shrub Stratum (Plot size: 20'x20'				✓ 2 - Dominance Test is >50%
1				3 - Prevalence Index is ≤3.0 ¹
2				4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
3				Problematic Hydrophytic Vegetation ¹ (Explain)
4				1 Toblematic Trydrophytic Vegetation (Explain)
5				¹ Indicators of hydric soil and wetland hydrology must
6				be present, unless disturbed or problematic.
	;	= Total Cove	er	Definitions of Five Vegetation Strata:
50% of total cover:	20% of	total cover:		Tree – Woody plants, excluding woody vines,
Herb Stratum (Plot size: 20'x20')				approximately 20 ft (6 m) or more in height and 3 in.
1. Juncus effusus	25%	YES	FACW	(7.6 cm) or larger in diameter at breast height (DBH).
2. Microstegium vimineum	20%	YES	FAC	Sapling – Woody plants, excluding woody vines,
3				approximately 20 ft (6 m) or more in height and less
4				than 3 in. (7.6 cm) DBH.
5				Shrub – Woody plants, excluding woody vines,
6				approximately 3 to 20 ft (1 to 6 m) in height.
7				Herb – All herbaceous (non-woody) plants, including
8				herbaceous vines, regardless of size, and woody
9				plants, except woody vines, less than approximately 3 ft (1 m) in height.
10				Manda di con a All con a de contra de la contra del la contra de la contra del la contra d
11				Woody vine – All woody vines, regardless of height.
	45%	= Total Cove	er	
50% of total cover: <u>22.5</u>	% 20% of	total cover:	9%	
Woody Vine Stratum (Plot size: 20'x20')		-		
1. Smilax rotundifolia	5%	YES	FAC	
2				
3				
4				
5.				
<u>. </u>	5%	= Total Cove		Hydrophytic
				Vegetation Present? Yes X No
50% of total cover: 2.5%		total cover:	1%	
Remarks: (Include photo numbers here or on a separate s Sphagnum moss present at this point.	neet.)			

SOIL Sampling Point: DP-18

inches)	Matrix Color (moist)	%	Color (moist)	ox Features	Type ¹	Loc ²	Texture		Remarks	
0-4	10YR 4/2	100	Color (moist)	%	rype	LUC	Sandy Loai		Remarks	
	-		40) (5.0)					-		
4-18	10YR 6/2	90	10YR 6/8	10	С	PL	Sandy Loam	-		
	-									
				. <u> </u>						
		alatian DM	Dadwaad Matrix M	IC Maalaad C	`l O		2 ₁ + : DI	Dana Lini	a a M Matrix	
	oncentration, D=Del	pletion, Rivi	=Reduced Matrix, M	is=iviasked s	and Gra	ins.			ng, M=Matrix. roblematic Hy	dric Soils ³
Histosol			Dark Surfac	o (S7)					A10) (MLRA 1	
	oipedon (A2)			e (37) elow Surface	(S8) (M	I RA 147.			Redox (A16)	71)
Black Hi			Thin Dark S				=	(MLRA 14		
	en Sulfide (A4)			ed Matrix (F2		, ,	Pi		oodplain Soils	(F19)
Stratified	d Layers (A5)		X Depleted Ma	atrix (F3)				(MLRA 13	6, 147)	
	ıck (A10) (LRR N)			Surface (F6)				•	/ Dark Surface	. ,
	d Below Dark Surfac	ce (A11)		ark Surface (F	- 7)		0	ther (Expla	in in Remarks)	
	ark Surface (A12)	I DD N		essions (F8)	(E40) (1	DD N				
	Mucky Mineral (S1) (A 147, 148)	LKK N,	Iron-Mangar		(F12) (L	.KK N,				
	Gleyed Matrix (S4)		Umbric Surf	•	I RΔ 130	\$ 122\	³ Indi	cators of h	ydrophytic veg	etation and
-	Redox (S5)		Piedmont FI						logy must be p	
	Matrix (S6)			Material (F21				-	ed or problema	
	Layer (if observed)):		•					·	
SUICUVE I	,									
Type:										
Type:							Hydric Soil	Present?	Yes <u>×</u>	No
Type: Depth (inc			<u> </u>				Hydric Soil	Present?	Yes X	No
Type: Depth (inc							Hydric Soil	Present?	Yes X	No
Type: Depth (inc							Hydric Soil	Present?	Yes X	No
Type: Depth (inc							Hydric Soil	Present?	Yes X	No
Type: Depth (inc							Hydric Soil	Present?	Yes X	No
Type: Depth (inc							Hydric Soil	Present?	Yes X	No
Type: Depth (inc							Hydric Soil	Present?	Yes X	No
Type: Depth (inc							Hydric Soil	Present?	Yes X	No
Type: Depth (inc							Hydric Soil	Present?	Yes X	No
Type: Depth (inc							Hydric Soil	Present?	Yes X	No
Type: Depth (inc							Hydric Soil	Present?	Yes X	No
Type: Depth (inc							Hydric Soil	Present?	Yes X	No
Type: Depth (inc							Hydric Soil	Present?	Yes X	No
Type: Depth (inc							Hydric Soil	Present?	Yes X	No
Type: Depth (inc							Hydric Soil	Present?	Yes X	No
Type: Depth (inc							Hydric Soil	Present?	Yes X	No
Туре:							Hydric Soil	Present?	Yes X	No
Type: Depth (inc							Hydric Soil	Present?	Yes X	No
Type: Depth (inc							Hydric Soil	Present?	Yes X	No
Type: Depth (inc							Hydric Soil	Present?	Yes X	No
Type: Depth (inc							Hydric Soil	Present?	Yes X	No
Type: Depth (inc							Hydric Soil	Present?	Yes X	No

Project/Site: Cumberland County Property	City/County: Cumberland County Sampling Date: 4/25/2018
Applicant/Owner: CWV, LLC; c/o James H. Martin	State: VA Sampling Point: <u>DP-18, UPL</u>
Investigator(s): Hannah L. Miller	Section, Township, Range: Tax Map # 45-A-11
	Local relief (concave, convex, none): Slope (%): 3-5%
Subregion (LRR or MLRA): n/a Lat: 37.550	
Soil Map Unit Name: Chewacla and Monocan Soils	NWI classification: UPL
Are climatic / hydrologic conditions on the site typical for this time	
Are Vegetation, Soil, or Hydrology signific	\checkmark
Are Vegetation, Soil, or Hydrology natural	
Are vegetation, on Hydrology hattiral	y problematic: (if needed, explain any answers in remarks.)
SUMMARY OF FINDINGS – Attach site map show	ving sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No_X	Is the Sampled Area
Hydric Soil Present? Yes No_X	within a Wetland? Yes NoX
Wetland Hydrology Present? Yes No X	
Remarks:	
Data point was taken adjacent to flag K-80.	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that ap	· · ·
	tic Plants (B14) Sparsely Vegetated Concave Surface (B8)
	Sulfide Odor (C1) Drainage Patterns (B10)
	Rhizospheres on Living Roots (C3) Moss Trim Lines (B16)
	of Reduced Iron (C4) Dry-Season Water Table (C2)
	n Reduction in Tilled Soils (C6) Crayfish Burrows (C8)
	Surface (C7) Saturation Visible on Aerial Imagery (C9)
	Dlain in Remarks) Stunted or Stressed Plants (D1)
Iron Deposits (B5)	Geomorphic Position (D2)
Inundation Visible on Aerial Imagery (B7)	Shallow Aquitard (D3)
Water-Stained Leaves (B9)	Microtopographic Relief (D4)
Aquatic Fauna (B13) Field Observations:	FAC-Neutral Test (D5)
Surface Water Present? Yes No _X_ Depth (in-	ches).
Water Table Present? Yes No _X_ Depth (in	·
Saturation Present? Yes No _X Depth (in	
(includes capillary fringe)	Wettand Trydrology Tresent: Tes No
Describe Recorded Data (stream gauge, monitoring well, aerial	photos, previous inspections), if available:
Remarks:	

/EGETATION (Five Strata) – Use scientific na	mes of	plants.		Sampling Point: DP-18, UPL
001-001	Absolute	Dominant I		Dominance Test worksheet:
Tree Stratum (Plot size: 20'x20')		Species?		Number of Dominant Species
1. Liriodendron tulipfera	20%	YES	FACU	That Are OBL, FACW, or FAC: 1 (A)
2. Fagus grandifolia	20%	YES	FACU	Total Number of Dominant
3				Species Across All Strata: 6 (B)
4				Descript of Descript Chaption
5				Percent of Dominant Species That Are OBL, FACW, or FAC: 16% (A/B)
6		<u> </u>		
	40%	= Total Cove	er	Prevalence Index worksheet:
50% of total cover: 20%				Total % Cover of: Multiply by:
Sapling Stratum (Plot size: 20'x20')	20 /0 01	luiai covei		OBL species 0 x 1 = 0
4. Farmer and PfaRa	15%	VEC	FAC	FACW species <u>0</u> x 2 = <u>0</u>
a lley enece		YES		FAC species <u>15</u> x 3 = <u>45</u>
2. Ilex opaca	15%	YES	FACU	FACU species x 4 = 300
3				UPL species 10 x 5 = 50
4				Column Totals: 100 (A) 395 (B)
5				
6				Prevalence Index = B/A = 3.95
	30%	= Total Cove	r	Hydrophytic Vegetation Indicators:
50% of total cover:15%	_ 20% of	total cover:_	6%	1 - Rapid Test for Hydrophytic Vegetation
Shrub Stratum (Plot size: 20'x20')				2 - Dominance Test is >50%
1				3 - Prevalence Index is ≤3.0 ¹
2				4 - Morphological Adaptations ¹ (Provide supporting
3				data in Remarks or on a separate sheet)
				Problematic Hydrophytic Vegetation ¹ (Explain)
4				
5		•		¹ Indicators of hydric soil and wetland hydrology must
6				be present, unless disturbed or problematic.
		= Total Cove	ır.	Definitions of Five Vegetation Strata:
50% of total cover:	20% of	total cover:_		Tree – Woody plants, excluding woody vines,
Herb Stratum (Plot size: 20'x20')				approximately 20 ft (6 m) or more in height and 3 in.
Polystichum acrostichoides	20%	YES	FACU	(7.6 cm) or larger in diameter at breast height (DBH).
2. Podophyllum peltatum	10%	YES	UPL	Sapling – Woody plants, excluding woody vines,
3				approximately 20 ft (6 m) or more in height and less
4		<u> </u>		than 3 in. (7.6 cm) DBH.
5				Shrub – Woody plants, excluding woody vines,
6				approximately 3 to 20 ft (1 to 6 m) in height.
7				Herb – All herbaceous (non-woody) plants, including
8				herbaceous vines, regardless of size, and woody
9				plants, except woody vines, less than approximately 3
				ft (1 m) in height.
10				Woody vine – All woody vines, regardless of height.
11				
		= Total Cove		
50% of total cover: 15%	20% of	total cover:_	6%	
Woody Vine Stratum (Plot size: 20'x20')				
1				
2				
3				
4				
5				
<u></u>		= Total Cove		Hydrophytic
				Vegetation Present? Yes No
50% of total cover:		total cover:_		
Remarks: (Include photo numbers here or on a separate sh	neet.)			

Sampling Point: DP-18, UPL

Depth Matrix Redox Features
0-4 10YR 5/3 100 Sandy Loam 4-18 10YR 6/6 100 Sandy C. Loam 1 Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. 2 Location: PL=Pore Lining, M=Matrix. Hydric Soil Indicators: Indicators for Problematic Hydric Soils 3: Histosol (A1) Dark Surface (S7) 2 cm Muck (A10) (MLRA 147) Histic Epipedon (A2) Polyvalue Below Surface (S8) (MLRA 147, 148) Coast Prairie Redox (A16) Black Histic (A3) Thin Dark Surface (S9) (MLRA 147, 148) (MLRA 147, 148) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Peledom Hatrix (F3) 2 cm Muck (A10) (LRR N) Redox Dark Surface (F6) WILL A147, 148) Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Other (Explain in Remarks) Thick Dark Surface (A12) Redox Depressions (F8) Sandy Mucky Mineral (S1) (LRR N, MLRA 136, 147) Other (Explain in Remarks) MLRA 147, 148) MLRA 136, 147, 148) Sandy Gleyed Matrix (S4) Piedmont Floodplain Soils (F19) (MLRA 136, 147) Sandy Gleyed Matrix (S4) WILRA 136, 147, 148) Wetland hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Type:
4-18 10YR 6/6 100 Sandy C. Loam Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Hydric Soil Indicators: Histosol (A1) Dark Surface (S7) Surface (S8) (MLRA 147, 148) Coast Prairie Redox (A16) (MLRA 147) Histic Epipedon (A2) Polyvalue Below Surface (S8) (MLRA 147, 148) Coast Prairie Redox (A16) Black Histic (A3) Thin Dark Surface (S9) (MLRA 147, 148) (MLRA 147, 148) Stratified Layers (A5) Depleted Matrix (F2) Piedmont Floodplain Soils (F19) Stratified Layers (A5) Pelpeted Dark Surface (F6) Meta Matrix (F2) Surface (F7) Piedmont Floodplain Soils (F19) Thick Dark Surface (A11) Depleted Dark Surface (F7) Pelpeted Dark Surface (F7) Piedmont Floodplain S
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. PL=Pore Lining, M=Matrix. Phydric Soil Indicators: Indicators for Problematic Hydric Soils ³ : Histosol (A1)
Hydric Soil Indicators: Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148) Sandy Gleyed Matrix (S4) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Red Parent Material (F21) (MLRA 136, 122) Type: Type: Indicators for Problematic Hydric Soils ³ : Indicators for Problematic Hydric Soils ³ : Indicators for Problematic Hydric Soils ³ : 1 2 cm Muck (A10) (MLRA 147, 148) (MLRA 147, 148) (MLRA 147, 148) (MLRA 147, 148) (MLRA 136, 147) Very Shallow Dark Surface (F19) Other (Explain in Remarks) Thick Dark Surface (A12) Redox Depressions (F8) Iron-Manganese Masses (F12) (LRR N, MLRA 136, 122) Sandy Redox (S5) Red Parent Material (F21) (MLRA 148) Restrictive Layer (if observed): Type: Type: Indicators for Problematic Hydric Soils ³ : 2 cm Muck (A10) (MLRA 147, 148) Coast Prairie Redox (A16) (MLRA 147, 148) Coast Prairie Redox (A16) (MLRA 147, 148) Depleted Matrix (F2) (MLRA 136, 147) Very Shallow Dark Surface (F12) Other (Explain in Remarks) Thick Dark Surface (F13) (MLRA 136, 122) Shallow Dark Surface (F13) (MLRA 136, 122) Shallow Dark Surface (F13) (MLRA 136, 122) Shallow Dark Surface (F13) (MLRA 136, 122) MLRA 136, 122) Shallow Dark Surface (F13) (MLRA 136, 122) MLRA 136, 123 Shallow Dark Surface (F13) (MLRA 148) Wetland hydrology must be present, unless disturbed or problematic.
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Black Histic (A3)
Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Matrix (F3) MLRA 136, 147) Yery Shallow Dark Surface (TF12) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Sitripped Matrix (S6) Redox Depressions (F12) (LRR N, MLRA 136, 122) Piedmont Floodplain Soils (F19) (MLRA 136, 147) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Other (Explain in Remarks) All Diron-Manganese Masses (F12) (LRR N, MLRA 136, 122) Mucky Mineral (S1) (MLRA 136, 122) Mucky Mineral (S4) Mucky Mineral (S5) Mucky Mineral (S1) (MLRA 136, 122) Mucky Mineral (S4) Mucky Mineral (S1) (MLRA 136, 122) Mucky Mineral (S5) Mucky Mineral (S4) Mucky Mineral (S6) Mucky Mineral (S1) (MLRA 136, 122) Mucky Min
Stratified Layers (A5) Depleted Matrix (F3) Very Shallow Dark Surface (TF12) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Other (Explain in Remarks) Other (Explain in Remarks) Other (Explain in Remarks) Sandy Mucky Mineral (S1) (LRR N, MLRA 136) Sandy Gleyed Matrix (S4) Sundy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 136, 122) Sitripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) very Shallow Dark Surface (TF12) Other (Explain in Remarks) Other (Explain in Remarks) Sandy Mucky Mineral (S1) (LRR N, MLRA 136) Iron-Manganese Masses (F12) (LRR N, MLRA 136, 122) Sandy Gleyed Matrix (S4) Piedmont Floodplain Soils (F19) (MLRA 148) wetland hydrology must be present, unless disturbed or problematic Red Parent Material (F21) (MLRA 127, 147) unless disturbed or problematic.
2 cm Muck (A10) (LRR N) Redox Dark Surface (F6) Very Shallow Dark Surface (TF12) Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Other (Explain in Remarks) Sandy Mucky Mineral (S1) (LRR N, MLRA 136) Sandy Gleyed Matrix (S4) Umbric Surface (F13) (MLRA 136, 122) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 148) Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) unless disturbed or problematic Type:
Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Other (Explain in Remarks) Thick Dark Surface (A12) Redox Depressions (F8) Sandy Mucky Mineral (S1) (LRR N, MLRA 136) Sandy Gleyed Matrix (S4) Umbric Surface (F13) (MLRA 136, 122) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 148) Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) unless disturbed or problematic Type:
Thick Dark Surface (A12) Redox Depressions (F8) Sandy Mucky Mineral (S1) (LRR N, MLRA 136)
Sandy Mucky Mineral (S1) (LRR N,
MLRA 147, 148) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Restrictive Layer (if observed): Type:
Sandy Gleyed Matrix (S4) Umbric Surface (F13) (MLRA 136, 122) Sandy Redox (S5)
Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 148) wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed): Type:
Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) unless disturbed or problematic. Restrictive Layer (if observed): Type:
Restrictive Layer (if observed): Type:
Denth (inches): Hydric Soil Present? Ves No X
Popul (mono). Hydric John 1656 iii. 165 iii.
Remarks:
Tomano.

Project/Site: Cumberland	County Property	y City/C	county: Cumberlan	nd County	Sampling Date: 4/25/2018
Applicant/Owner: CWV, LLC; of					Sampling Point: DP-19
Investigator(s): Hannah L.		Section	on Township Range		
					Slope (%): 1-3%
Soil Map Unit Name:		· · · · · · · · · · · · · · · · · · ·		NWI classific	
Are climatic / hydrologic condit				(If no, explain in F	
Are Vegetation, Soil					present? Yes X No
Are Vegetation, Soil				, explain any answe	
Are vegetation, 50ii	, or riyurology _	naturally problems	alic: (II fieeded,	explain any answe	ers in itemarks.)
SUMMARY OF FINDIN	GS – Attach site	map showing sam	npling point locati	ions, transects	s, important features, etc.
Hydrophytic Vegetation Pres	ent? Yes X	No	Is the Sampled Area		
Hydric Soil Present?	Yes X	(No	within a Wetland?	$_{Yes}$ $ imes$	No
Wetland Hydrology Present?	Yes X	No			
Remarks:					
Data point was taken	novit to floor I/ 147				
Data point was taken	next to flag K-147.	•			
HYDROLOGY					
Wetland Hydrology Indicate	ors:			Secondary Indic	ators (minimum of two required)
Primary Indicators (minimum		eck all that apply)		Surface Soil	
Surface Water (A1)		True Aquatic Plants (B14)		getated Concave Surface (B8)
X High Water Table (A2)		Hydrogen Sulfide Od		X Drainage Pa	=
Saturation (A3)		Oxidized Rhizosphere			
Water Marks (B1)		Presence of Reduced	-		Water Table (C2)
Sediment Deposits (B2)		Recent Iron Reductio		Crayfish Bur	
Drift Deposits (B3)	<u>-</u>	Thin Muck Surface (C	C7)	Saturation V	isible on Aerial Imagery (C9)
Algal Mat or Crust (B4)	_	Other (Explain in Rer	marks)	Stunted or S	Stressed Plants (D1)
Iron Deposits (B5)				X Geomorphic	Position (D2)
Inundation Visible on Ae	rial Imagery (B7)			Shallow Aqu	uitard (D3)
X Water-Stained Leaves (F	39)			Microtopogr	aphic Relief (D4)
Aquatic Fauna (B13)				FAC-Neutra	l Test (D5)
Field Observations:					
Surface Water Present?	Yes No>	C_ Depth (inches):			
Water Table Present?	Yes <u>X</u> No	Depth (inches):5"			
Saturation Present?	Yes No	X_ Depth (inches):	Wetland	Hydrology Prese	nt? Yes X No
(includes capillary fringe) Describe Recorded Data (str	oom gougo monitorir	a well periol photos, pro	wious inspections) if av	vailable:	
Describe Recorded Data (Str	eam gauge, monitorin	ig well, aerial priolos, pre	ivious irispections), ii av	raliable.	
-					
Remarks:					

/EGETATION (Five Strata) – Use scientific n	ames of	plants.		Sampling Point: DP-19
001.001	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 20'x20')		Species?	Status	Number of Dominant Species
1. Plantanus occidentalis	25%	YES_	FACW	That Are OBL, FACW, or FAC: 6 (A)
2				Total Number of Dominant
3				Species Across All Strata: 6 (B)
4				Persont of Deminant Charles
5				Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)
6				
	25%	= Total Cov	er	Prevalence Index worksheet:
50% of total cover: 12.	5% 20% of	total cover:	5%	Total % Cover of: Multiply by:
Sapling Stratum (Plot size: 20'x20')		1010.		OBL species x 1 =
Carpinus caroliniana	20%	YES	FAC	FACW species x 2 =
2. Acer rubrum	15%	YES	FAC	FAC species x 3 =
3				FACU species x 4 =
				UPL species x 5 =
4				Column Totals: (A) (B)
5	·			Drawales es Index D/A
6. <u> </u>	35%	= Total Cov		Prevalence Index = B/A =
				Hydrophytic Vegetation Indicators:
50% of total cover: <u>17.5</u>	20% of	total cover:	<u>/%</u>	1 - Rapid Test for Hydrophytic Vegetation
Shrub Stratum (Plot size: 20'x20'				✓ 2 - Dominance Test is >50%
1				3 - Prevalence Index is ≤3.0¹
2				4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
3				Problematic Hydrophytic Vegetation ¹ (Explain)
4				Problematic Hydrophytic Vegetation (Explain)
5				The Person of headers will be designed by destance and
6		·		¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
		= Total Cov	er	Definitions of Five Vegetation Strata:
50% of total cover:	20% of	total cover		Deminions of Five Vegetation Strata.
Herb Stratum (Plot size: 20'x20')	2070 01	total oover.		Tree – Woody plants, excluding woody vines,
	15%	YES	FACW	approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).
0				
				Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less
3				than 3 in. (7.6 cm) DBH.
4		. ———		Charle Manager and Advantage a
5		· 		Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.
6				
7				Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody
8				plants, except woody vines, less than approximately 3
9				ft (1 m) in height.
10				Woody vine – All woody vines, regardless of height.
11				The same of the sa
	15%	= Total Cov	er	
50% of total cover: 7.5	5% 20% of	total cover:	3%	
Woody Vine Stratum (Plot size: 20'x20')				
1. Vitis riparia	15%	YES	FACW	
2. Smilax rotundifolia	10%	YES	FAC	
3		- -		
4				
5.				
<u>. </u>		= Total Cov	er	Hydrophytic
10.5				Vegetation Present? Yes X No
50% of total cover: 12.5		total cover:	5%	
Remarks: (Include photo numbers here or on a separate :	sneet.)			

SOIL Sampling Point: DP-19

Profile Desc	ription: (Describe	to the dept	th needed to docun	nent the i	ndicator	or confirm	the absence of indicators.)
Depth	Matrix		Redo	x Feature:	s		
(inches)	Color (moist)	<u>%</u>	Color (moist)	%	Type ¹	Loc ²	Texture Remarks
0-5	10YR 3/2	100			-		Sandy Loam
5-18	10YR 6/2	85	10YR 7/8	15	С	PL	Sandy Loam
					-		
	-						
		· 			-		
1		Indian DM	Deduced Metric MC				21 and 22 Properties At Matrix
Hydric Soil	oncentration, D=Dep	letion, RM=	Reduced Matrix, MS	s=Masked	Sand Gra	ains.	² Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils ³ :
_			D 10 ((07)			
Histosol			Dark Surface		(CO) (N	U D A 447	2 cm Muck (A10) (MLRA 147)
	oipedon (A2)		Polyvalue Be				
Black Hi	en Sulfide (A4)		Thin Dark Su Loamy Gleye			47, 140)	(MLRA 147, 148) Piedmont Floodplain Soils (F19)
	d Layers (A5)		Z Depleted Mat	,	r <i>z)</i>		(MLRA 136, 147)
	ick (A10) (LRR N)		Redox Dark S	. ,	·6)		Very Shallow Dark Surface (TF12)
	d Below Dark Surface	e (A11)	Depleted Dar	,	,		Other (Explain in Remarks)
	ark Surface (A12)	- (Redox Depre				
	lucky Mineral (S1) (L	.RR N,	Iron-Mangan			LRR N,	
MLRA	A 147, 148)		MLRA 13	6)			
	Bleyed Matrix (S4)		Umbric Surfa				³ Indicators of hydrophytic vegetation and
	Redox (S5)		Piedmont Flo				
	Matrix (S6)		Red Parent N	/laterial (F	21) (MLR	A 127, 147	7) unless disturbed or problematic.
	Layer (if observed):						
Type:			<u></u>				
Depth (inc	ches):						Hydric Soil Present? Yes X No No
Remarks:							

Project/Site: Cumberland Coun	ty Property	City/C	county: Cumberlar	nd County	Sampling Date: 4/25/2018
Applicant/Owner: CWV, LLC; c/o Jai			,		Sampling Point: <u>DP-19, UPL</u>
Investigator(s): Hannah L. Miller		Section	on, Township, Range: _	Tax Map # 45-A	
Landform (hillslope, terrace, etc.): Hil	Islane/Tae of Slar	ne Local reli	ief (concave_convex_n	one).	Slone (%)· 3-5%
Subregion (LRR or MLRA): n/a			Long:		
Soil Map Unit Name: Chewacla and				NWI classifica	
Are climatic / hydrologic conditions on		his time of year? Y	res X No	(If no, explain in Re	
Are Vegetation, Soil, o					esent? Yes X No
Are Vegetation, Soil, o				, explain any answers	
, com, com	Trydrology	_naturally problems	dio: (ii fieddad	, explain any anowers	o in recinance.
SUMMARY OF FINDINGS - A	Attach site map	showing sam	npling point locat	ions, transects,	important features, etc.
Hydrophytic Vegetation Present?	Yes	No. Y			
Hydric Soil Present?	Yes		Is the Sampled Area within a Wetland?	l Ves	_ No <u>X</u>
Wetland Hydrology Present?	Yes		within a wettand:	163	
Remarks:	100	110 _71			
Nomano.					
Data point was taken adjace	nt to flag K-147.				
HYDROLOGY	_				
Wetland Hydrology Indicators:					ors (minimum of two required)
Primary Indicators (minimum of one i	-			Surface Soil C	
Surface Water (A1)		ue Aquatic Plants (etated Concave Surface (B8)
High Water Table (A2)	-	drogen Sulfide Od		Drainage Patt	
Saturation (A3)			es on Living Roots (C3)		, ,
Water Marks (B1)		esence of Reduced			/ater Table (C2)
Sediment Deposits (B2)			on in Tilled Soils (C6)	Crayfish Burro	
Drift Deposits (B3)		in Muck Surface (C			ible on Aerial Imagery (C9)
Algal Mat or Crust (B4)	Ou	her (Explain in Rer	narks)		essed Plants (D1)
Iron Deposits (B5) Inundation Visible on Aerial Imag	nery (R7)			Geomorphic F Shallow Aquit	
Water-Stained Leaves (B9)	jery (Dr)				phic Relief (D4)
Aquatic Fauna (B13)				FAC-Neutral	
Field Observations:					
	No <u>×</u> D	enth (inches):			
	No _X_ D				
	No _X_ D			Hydrology Present	? Yes No X
(includes capillary fringe)					. 103 NO
Describe Recorded Data (stream gau	ige, monitoring well	, aerial photos, pre	evious inspections), if a	vailable:	
Remarks:					

/EGETATION (Five Strata) – Use scientific na	mes of	plants.		Sampling Point: DP-19, UPL
001-001	Absolute	Dominant I		Dominance Test worksheet:
Tree Stratum (Plot size: 20'x20')		Species?		Number of Dominant Species
1. Liriodendron tulipfera	30%	<u>YES</u>	FACU	That Are OBL, FACW, or FAC: 2 (A)
2. Fagus grandifolia	35%	YES	FACU	Total Number of Dominant
3				Species Across All Strata: 5 (B)
4				Descript of Dominant Charles
5				Percent of Dominant Species That Are OBL, FACW, or FAC: 40% (A/B)
6				
<u> </u>	050/	= Total Cove	<u></u>	Prevalence Index worksheet:
50% of total cover: 32.5	% 20% of	total cover	13%	Total % Cover of: Multiply by:
Sapling Stratum (Plot size: 20'x20')	/ 20 /0 Oi	luidi cover		OBL species 0 x 1 = 0
4. How are an	15%	VEC	EAC	FACW species <u>0</u> x 2 = <u>0</u>
1. Ilex opaca		YES	FAC	FAC species <u>25</u> x 3 = <u>75</u>
2. Acer rubrum	10%	YES	FAC	FACU species x 4 = 300
3				UPL species 0 x 5 = 0
4				Column Totals: 100 (A) 375 (B)
5				,,,,,,,
6				Prevalence Index = B/A = 3.75
	25%	= Total Cove	∍r	Hydrophytic Vegetation Indicators:
50% of total cover:12.5	5% 20% of	total cover:	5%	1 - Rapid Test for Hydrophytic Vegetation
Shrub Stratum (Plot size: 20'x20')	2070 01	total cover.		2 - Dominance Test is >50%
				3 - Prevalence Index is ≤3.0 ¹
1				4 - Morphological Adaptations ¹ (Provide supporting
2				data in Remarks or on a separate sheet)
3	-			Problematic Hydrophytic Vegetation ¹ (Explain)
4				
5				¹ Indicators of hydric soil and wetland hydrology must
6				be present, unless disturbed or problematic.
		= Total Cove	∍r	Definitions of Five Vegetation Strata:
50% of total cover:	20% of	total cover:		
Herb Stratum (Plot size: 20'x20')		_		Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in.
Polystichum acrostichoides	10%	YES	FACU	(7.6 cm) or larger in diameter at breast height (DBH).
_		· · · · · · · · · · · · · · · · · · ·	17100	
				Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less
				than 3 in. (7.6 cm) DBH.
4				a.
5				Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.
6				approximatory of to 20 ft (1 to 0 ft), in Holghi.
7				Herb – All herbaceous (non-woody) plants, including
8				herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3
9				ft (1 m) in height.
10				Woody vine All woody vines regardless of height
11				Woody vine – All woody vines, regardless of height.
		= Total Cove	er	
50% of total cover: 5%	20% of	total cover:	2%	
Woody Vine Stratum (Plot size: 20'x20')	20 /0 01	total cover.	<u> </u>	
1				
2				
3				
4				
5				Hydrophytic
	:	= Total Cove	∍r	Vegetation
50% of total cover:	20% of	total cover:		Present? Yes No X
Remarks: (Include photo numbers here or on a separate si		total oover		
Remarks. (include prioto numbers here of on a separate si	neet.)			

Sampling Point: DP-19, UPL

Depth	Matrix		Redox Features	- December
inches)	Color (moist)	<u>%</u>	Color (moist) % Type ¹ Loc ²	
0-4	10YR 5/3	100		Sandy Loam_
4-10	10YR 5/6	100		Sandy Loam
10-18	10YR 6/4	100		Sandy Loam
				-
	•			
	-			
[vne: C=C	oncentration D-D	enletion PM-F	Reduced Matrix, MS=Masked Sand Grains.	² Location: PL=Pore Lining, M=Matrix.
	Indicators:	epietion, Kivi=K	Reduced Matrix, MS=Masked Sand Grains.	Indicators for Problematic Hydric Soils ³ :
Histosol			Dark Surface (S7)	2 cm Muck (A10) (MLRA 147)
	pipedon (A2)		Polyvalue Below Surface (S8) (MLRA 14	
	istic (A3)		Thin Dark Surface (S9) (MLRA 147, 148	
	en Sulfide (A4)		Loamy Gleyed Matrix (F2)	Piedmont Floodplain Soils (F19)
	d Layers (A5)		Depleted Matrix (F3)	(MLRA 136, 147)
	uck (A10) (LRR N)	(0.4.4)	Redox Dark Surface (F6)	Very Shallow Dark Surface (TF12)
	d Below Dark Surfa ark Surface (A12)	ace (A11)	Depleted Dark Surface (F7)Redox Depressions (F8)	Other (Explain in Remarks)
	Mucky Mineral (S1)	(I RR N	Iron-Manganese Masses (F12) (LRR N,	
	A 147, 148)	(=::::,	MLRA 136)	
	Gleyed Matrix (S4)		Umbric Surface (F13) (MLRA 136, 122)	³ Indicators of hydrophytic vegetation and
Sandy F	Redox (S5)		Piedmont Floodplain Soils (F19) (MLRA	148) wetland hydrology must be present,
	Matrix (S6)		Red Parent Material (F21) (MLRA 127, 1	unless disturbed or problematic.
estrictive	Layer (if observed	d):		
Type:			<u> </u>	
Depth (in	ches):		<u> </u>	Hydric Soil Present? Yes No X
emarks:				

Project/Site: Cumberland	County Property	Citv/C	ounty: Cumberland	d County	Sampling Date: 4/25/2018
Applicant/Owner: CWV, LLC; of					Sampling Point: DP-20
Investigator(s): Shannon D	. Hill	Section	on, Township, Range:		camping r onto \-1
					Slope (%):1-3%
Subregion (LRR or MLRA):n					
Soil Map Unit Name: Cecil sa			Long		cation: PFO
Are climatic / hydrologic condit			oo X No		
·					oresent? Yes X No
Are Vegetation, Soil					
Are Vegetation, Soil	, or Hydrology	naturally problema	atic? (If needed,	explain any answe	rs in Remarks.)
SUMMARY OF FINDIN	GS – Attach site ma	ap showing sam	pling point location	ons, transects	, important features, etc.
Hydrophytic Vegetation Pres	ent? Yes X	No	Is the Sampled Area		
Hydric Soil Present?	Yes X	No	within a Wetland?	$_{Yes}$ $ imes$	No
Wetland Hydrology Present?	Yes X	No			
Remarks:					
Data point was taken	next to flag G-13.				
	_				
HYDROLOGY					
Wetland Hydrology Indicat	ors:			Secondary Indica	ators (minimum of two required)
Primary Indicators (minimum	of one is required; check	all that apply)		Surface Soil	Cracks (B6)
X Surface Water (A1)	1	True Aquatic Plants (I	B14)	Sparsely Veg	getated Concave Surface (B8)
X High Water Table (A2)	<u> </u>	Hydrogen Sulfide Odd	or (C1)	X Drainage Pa	tterns (B10)
Saturation (A3)	(Oxidized Rhizosphere	es on Living Roots (C3)	X Moss Trim Li	ines (B16)
Water Marks (B1)	<u></u> F	Presence of Reduced	I Iron (C4)	Dry-Season	Water Table (C2)
Sediment Deposits (B2)	F	Recent Iron Reductio	n in Tilled Soils (C6)	Crayfish Buri	rows (C8)
Drift Deposits (B3)	1	Thin Muck Surface (C	(7)	Saturation Vi	isible on Aerial Imagery (C9)
Algal Mat or Crust (B4)	(Other (Explain in Ren	narks)	Stunted or St	tressed Plants (D1)
Iron Deposits (B5)				X Geomorphic	Position (D2)
Inundation Visible on Ae	rial Imagery (B7)			Shallow Aqui	itard (D3)
X Water-Stained Leaves (E	39)			Microtopogra	aphic Relief (D4)
Aquatic Fauna (B13)				FAC-Neutral	Test (D5)
Field Observations:					
Surface Water Present?	Yes <u>X</u> No				
Water Table Present?	Yes <u>X</u> No	Depth (inches): 6"			
Saturation Present?	Yes No <u>X</u>	Depth (inches):	Wetland I	Hydrology Presen	nt? Yes <u> </u>
(includes capillary fringe)		all agricl photos pro	vieus inenestiens) if ave	nilahla.	
Describe Recorded Data (str	eam gauge, monitoring we	eii, aeriai photos, pre	vious inspections), if ava	allable:	
Remarks:					
İ					

/EGETATION (Five Strata) – Use scientific n	ames of	plants.		Sampling Point: DP-20
	Absolute	Dominant I	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 20'x20')	% Cover	Species?	Status	Number of Dominant Species
1. Alnus serrulata	65%	YES	FACW	That Are OBL, FACW, or FAC: 3 (A)
2. Plantanus occidentalis	18%	YES	FACW	Total Number of Dominant
3				Species Across All Strata: 4 (B)
4				Barrest of Barrier of Caracian
5				Percent of Dominant Species That Are OBL, FACW, or FAC: 75% (A/B)
6.				
		= Total Cove	er	Prevalence Index worksheet:
50% of total cover: 41.				Total % Cover of: Multiply by:
	<u>0 70</u> 20% 01	total cover.	10.070	OBL species x 1 =
Sapling Stratum (Plot size: 20'x20')				FACW species x 2 =
1				FAC species x 3 =
2				FACU species x 4 =
3				UPL species x 5 =
4	<u> </u>			Column Totals: (A) (B)
5				(5)
6				Prevalence Index = B/A =
		= Total Cove	er	Hydrophytic Vegetation Indicators:
50% of total cover:	20% of	total cover:		1 - Rapid Test for Hydrophytic Vegetation
Shrub Stratum (Plot size: 20'x20')	20 /0 01	total cover.		2 - Dominance Test is >50%
				3 - Prevalence Index is ≤3.0 ¹
1				4 - Morphological Adaptations ¹ (Provide supporting
2				data in Remarks or on a separate sheet)
3				Problematic Hydrophytic Vegetation ¹ (Explain)
4				
5				¹ Indicators of hydric soil and wetland hydrology must
6	<u> </u>			be present, unless disturbed or problematic.
	:	= Total Cove	er	Definitions of Five Vegetation Strata:
50% of total cover:	20% of	total cover:		
Herb Stratum (Plot size: 20'x20')		_		Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in.
1. Juncus effusus	10%	YES	FACW	(7.6 cm) or larger in diameter at breast height (DBH).
2. Lonicera japonica	7%	YES	FACU	Continue Manda de man
				Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less
				than 3 in. (7.6 cm) DBH.
4				Charle Manda alerta quali di ancua de cina
5				Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.
6				
7				Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody
8				plants, except woody vines, less than approximately 3
9				ft (1 m) in height.
10				Woody vine – All woody vines, regardless of height.
11				Woody Villes, regardless of height.
	17%	= Total Cove	er	
50% of total cover: 8.	5% _{20% of}	total cover:	3.4%	
Woody Vine Stratum (Plot size: 20'x20')		<u>-</u>		
1				
2				
3				
4				
5				Hydrophytic
		= Total Cove	er	Vegetation
50% of total cover:	20% of	total cover:		Present? Yes X No No No
Remarks: (Include photo numbers here or on a separate				1
Tromaino. (morado prioto númbreio nete di un a ochalate	oricot.j			

SOIL Sampling Point: DP-20

Profile Desc	ription: (Describe	to the dep	th needed to docun	nent the i	ndicator	or confirm	n the absence of indicators.)
Depth	Matrix		Redo	x Feature:	s		
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture Remarks
0-6	10YR 3/3	100					Sandy Loam
6-18	10YR 6/1	90	10YR 7/8	10	С	PL	Sandy Loam
	-						
	-						
			_		'		
1Type: C-C	anacatration D_Don	lotion DM	- Poduced Metrix MS		L Cond Cr		2Location: DL - Data Lining M-Matrix
Hydric Soil	oncentration, D=Dep	ielion, Rivi=	Reduced Matrix, Mc	=iviasked	Sand Gra	airis.	² Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils ³ :
-			Dorle Curfoso	(07)			•
Histosol	oipedon (A2)		Dark Surface		oo (S9) (N	II D A 147	2 cm Muck (A10) (MLRA 147)
Histic Ep			Polyvalue Be Thin Dark Su				148) Coast Prairie Redox (A16) (MLRA 147, 148)
	en Sulfide (A4)		Loamy Gleye			47, 140)	Piedmont Floodplain Soils (F19)
	d Layers (A5)		Z Depleted Mat	,	r <i>z)</i>		(MLRA 136, 147)
	ick (A10) (LRR N)		Redox Dark S	. ,	·6)		Very Shallow Dark Surface (TF12)
	d Below Dark Surfac	e (A11)	Depleted Dar	,	,		Other (Explain in Remarks)
	ark Surface (A12)	,	Redox Depre				
	lucky Mineral (S1) (L	.RR N,	Iron-Mangan			LRR N,	
	A 147, 148)	,	MLRA 13		()(•	
	Gleyed Matrix (S4)		Umbric Surfa		MLRA 13	6, 122)	³ Indicators of hydrophytic vegetation and
	Redox (S5)		Piedmont Flo				
Stripped	Matrix (S6)		Red Parent N	laterial (F	21) (MLR	A 127, 147	7) unless disturbed or problematic.
Restrictive I	Layer (if observed):						
Type:							
Depth (in	ches):						Hydric Soil Present? Yes X No
Remarks:	, -						

Project/Site: Cumberland Count	y Property	City/Co	ounty: Cumberlan	nd County	Sampling Date: 4/25/2018
Applicant/Owner: CWV, LLC; c/o Jar			,		Sampling Point: <u>DP-20, UPL</u>
Investigator(s): Shannon D. Hill		Sectio	n, Township, Range: _	Tax Map #45-A	<u> </u>
Landform (hillslope, terrace, etc.): Hill	Islope/Toe of slope	e Local relie	ef (concave, convex, n	one):	Slope (%): 4-6%
					Datum:
Soil Map Unit Name: Cecil sandy los				NWI classific	
Are climatic / hydrologic conditions on				(If no, explain in R	
Are Vegetation, Soil, or					present? Yes X No
Are Vegetation, Soil, or				explain any answe	
, con, or	Trydrology	naturally problema	iio: (ii riccaca,	cxpidiri diriy dilowe	io in Romano.)
SUMMARY OF FINDINGS – A	Attach site map	showing sam	pling point locati	ions, transects	, important features, etc.
Hydrophytic Vegetation Present?	Yes 1	No X	Is the Sampled Area		
Hydric Soil Present?	Yes N		within a Wetland?	Yes	No <u> </u>
Wetland Hydrology Present?	Yes N	No X			<u> </u>
Remarks:					
Data point was taken adjacer	it to flag G-13.				
HYDROLOGY					
Wetland Hydrology Indicators:				Secondary Indica	tors (minimum of two required)
Primary Indicators (minimum of one is	s required: check all	that apply)		Surface Soil	
Surface Water (A1)	-	ie Aquatic Plants (E	314)		getated Concave Surface (B8)
High Water Table (A2)		drogen Sulfide Odd		Drainage Pat	
Saturation (A3)		-	es on Living Roots (C3)		
Water Marks (B1)		sence of Reduced			Water Table (C2)
Sediment Deposits (B2)			n in Tilled Soils (C6)	Crayfish Burr	
Drift Deposits (B3)		n Muck Surface (C		· ·	sible on Aerial Imagery (C9)
Algal Mat or Crust (B4)		ner (Explain in Rem			tressed Plants (D1)
Iron Deposits (B5)				Geomorphic	Position (D2)
Inundation Visible on Aerial Imag	ery (B7)			Shallow Aqui	itard (D3)
Water-Stained Leaves (B9)				Microtopogra	phic Relief (D4)
Aquatic Fauna (B13)				FAC-Neutral	Test (D5)
Field Observations:					
Surface Water Present? Yes _	No <u>X</u> De	epth (inches):			
Water Table Present? Yes _	No <u>X</u> De	epth (inches):			
Saturation Present? Yes _	No <u>X</u> De	epth (inches):	Wetland	Hydrology Presen	t? Yes No <u>X</u>
(includes capillary fringe) Describe Recorded Data (stream gau	go monitoring well	aarial photos prov	(ious inspections) if o	voilable:	
Describe Recorded Data (stream gad	ge, monitoring weil,	aeriai priotos, prev	vious irispections), ii av	/allable:	
Remarks:					
1					

/EGETATION (Five Strata) – Use scientific na	mes of	plants.		Sampling Point: DP-20, UPL
201/201	Absolute	Dominant I		Dominance Test worksheet:
Tree Stratum (Plot size: 20'x20')		Species?		Number of Dominant Species
1. Liriodendron tulipfera	25%	YES	FACU	That Are OBL, FACW, or FAC: 2 (A)
2. Fagus grandifolia		YES	FACU	Total Number of Dominant
3				Species Across All Strata: 5 (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 40% (A/B)
6				Prevalence Index worksheet:
07.7		= Total Cove		Total % Cover of: Multiply by:
50% of total cover: 27.5	<u>%</u> 20% of	total cover:_	11%	OBL species 0 x 1 = 0
Sapling Stratum (Plot size: 20'x20'				FACW species 0 x 2 = 0
1. Ilex opaca	15%	YES	FAC	FAC species 25 x 3 = 75
2			<u></u>	FACU species 75 x 4 = 300
3			<u></u>	UPL species 0 x 5 = 0
4				Column Totals: 100 (A) 375 (B)
5				
6				Prevalence Index = B/A = 3.75
	15%	= Total Cove	r	Hydrophytic Vegetation Indicators:
50% of total cover:7.5%	<u>6</u> 20% of	total cover:_	3%	1 - Rapid Test for Hydrophytic Vegetation
Shrub Stratum (Plot size: 20'x20'				2 - Dominance Test is >50%
1				3 - Prevalence Index is ≤3.0 ¹
2				4 - Morphological Adaptations ¹ (Provide supporting
3				data in Remarks or on a separate sheet)
4				Problematic Hydrophytic Vegetation ¹ (Explain)
5				4
6			<u> </u>	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
		= Total Cove	r	Definitions of Five Vegetation Strata:
50% of total cover:				Definitions of Five Vegetation Strata.
Herb Stratum (Plot size: 20'x20')	20% 01	total cover		Tree – Woody plants, excluding woody vines,
Polystichum acrostichoides	20%	YES	FACIL	approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).
			FACU	
2				Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less
3 4.				than 3 in. (7.6 cm) DBH.
				Should Mandy plants avaluding woody vines
5				Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.
6				
7				Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody
8				plants, except woody vines, less than approximately 3
9				ft (1 m) in height.
10				Woody vine – All woody vines, regardless of height.
11	200/	T-1-1-0		
		= Total Cove		
50% of total cover: 10%	20% of	total cover:_	4%	
Woody Vine Stratum (Plot size: 20'x20')	1001			
1. Smilax rotundifolia	10%	YES	FAC	
2			<u></u>	
3				
4				
5				Hydrophytic
	10%	= Total Cove	r	Vegetation
50% of total cover:5%	20% of	total cover:	2%	Present? Yes NoX
Remarks: (Include photo numbers here or on a separate sl		_		I .
(1111) 1111 1111 1111 1111 1111 1111	, ,			

Sampling Point: DP-20, UPL

/* I \	Matrix		Redox Features	2 Demande
(inches)	Color (moist)	<u>%</u>	Color (moist) % Type ¹ Loc	
0-5	10YR 5/3	100		Sandy Loam
5-18	10YR 5/4	100		Sandy Loam
	-			
				<u> </u>
•				
		pletion, RM=R	educed Matrix, MS=Masked Sand Grains.	² Location: PL=Pore Lining, M=Matrix.
dric Soil I	ndicators:			Indicators for Problematic Hydric Soils ³ :
_ Histosol			Dark Surface (S7)	2 cm Muck (A10) (MLRA 147)
	pipedon (A2)		Polyvalue Below Surface (S8) (MLRA	
_ Black His			Thin Dark Surface (S9) (MLRA 147, 14	
	n Sulfide (A4) I Layers (A5)		Loamy Gleyed Matrix (F2)Depleted Matrix (F3)	Piedmont Floodplain Soils (F19) (MLRA 136, 147)
	ick (A10) (LRR N)		Redox Dark Surface (F6)	Very Shallow Dark Surface (TF12)
	d Below Dark Surfa	ice (A11)	Depleted Dark Surface (F7)	Other (Explain in Remarks)
	ark Surface (A12)	` ,	Redox Depressions (F8)	
	lucky Mineral (S1)	(LRR N,	Iron-Manganese Masses (F12) (LRR N	I,
MLRA	A 147, 148)		MLRA 136)	
	lleyed Matrix (S4)		Umbric Surface (F13) (MLRA 136, 122	
	edox (S5)		Piedmont Floodplain Soils (F19) (MLR	
	Matrix (S6)		Red Parent Material (F21) (MLRA 127	, 147) unless disturbed or problematic.
	_ayer (if observed	i):		
Type:			_	
			<u> </u>	Hydric Soil Present? Yes No _X
	ches):			
	ches):			
Depth (inc	ches):			
Depth (inc	ches):			
Depth (inc	ches):			
Depth (inc	ches):			
Depth (inc	ches):			
Depth (inc	ches):			
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Depth (inc	ches):			
Depth (inc	ches):			
Depth (inc	ches):			
Depth (inc	ches):			

Project/Site: Cumberland	Coun	ty P	roperty	City/C	County: C	umberlan	d County	Sampling Date:	4/27/2018
Applicant/Owner: CWV, LLC; o								Sampling Point	
Investigator(s): Shannon D				Section	on. Townsh	nip. Range:	Tax Map # 45-	A-1	
Landform (hillslope, terrace, et									e (%): 1-3%
Subregion (LRR or MLRA):n									
Soil Map Unit Name: Enon-H									
Are climatic / hydrologic condit							(If no, explain in F		
Are Vegetation, Soil								present? Yes X	< No
Are Vegetation, Soil							explain any answ		110
-									
SUMMARY OF FINDIN	GS – <i>I</i>	Attac	ch site	map showing san	npling po	oint locati	ons, transects	s, important fe	atures, etc.
Hydrophytic Vegetation Pres	ent?	,	_{Yes} X	No	le the Se	mpled Area			
Hydric Soil Present?			res X			Wetland?	$_{Yes}$ $ imes$	No	
Wetland Hydrology Present?			res X						•
Remarks:									
		_							
Data point was taken i	next to	flag	G-76.						
									ļ
HYDROLOGY									
Wetland Hydrology Indicate							Secondary Indic	ators (minimum of t	wo required)
Primary Indicators (minimum	of one i	s requ	uired; che	eck all that apply)				l Cracks (B6)	
X Surface Water (A1)			_	_ True Aquatic Plants ((B14)			egetated Concave S	Surface (B8)
X High Water Table (A2)			_	_ Hydrogen Sulfide Od	dor (C1)		X Drainage Pa	atterns (B10)	
X Saturation (A3)			_	Oxidized Rhizospher	res on Living	g Roots (C3)	\times Moss Trim I	₋ines (B16)	
Water Marks (B1)			_	_ Presence of Reduced	d Iron (C4)		Dry-Season	Water Table (C2)	
Sediment Deposits (B2)			_	Recent Iron Reduction	on in Tilled S	Soils (C6)	X Crayfish Bu	rrows (C8)	
Drift Deposits (B3)			_	_ Thin Muck Surface (0	C7)		Saturation \	/isible on Aerial Ima	agery (C9)
Algal Mat or Crust (B4)			_	_ Other (Explain in Rer	marks)		Stunted or S	Stressed Plants (D1)
Iron Deposits (B5)							X Geomorphic	Position (D2)	
Inundation Visible on Ae	_	gery (B7)				Shallow Aqu	uitard (D3)	
X Water-Stained Leaves (E	39)						Microtopogr	raphic Relief (D4)	
Aquatic Fauna (B13)							FAC-Neutra	ıl Test (D5)	
Field Observations:									
Surface Water Present?	Yes _	X	No	Depth (inches): 0"					
Water Table Present?	Yes_	X	No	Depth (inches): 4"					
Saturation Present?	Yes_	X	No	Depth (inches): 6"		Wetland	Hydrology Prese	ent? Yes X	No
(includes capillary fringe) Describe Recorded Data (stre	00m 001	100 r	oonitoring	a wall parial photos pro	ovious inspe	octions) if av	railable:		
Describe Necolded Data (Str	saiii yat	ige, ii	ΙΟΙΙΙΟΙΙΙΙ	g well, aerial priotos, pre	evious irispe	50110115), 11 av	allable.		
Demontos									
Remarks:									

/EGETATION (Five Strata) – Use scientific na	mes of _l	plants.		Sampling Point: DP-21
· · · · · · · · · · · · · · · · · · ·		Dominant	Indicator	Dominance Test worksheet:
		Species?		Number of Dominant Species _
	25%	YES	FACW	That Are OBL, FACW, or FAC: 5 (A)
2				
3				Total Number of Dominant Species Across All Strata: 5 (B)
				Species Across All Strata: 5 (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 100% (A/B)
6				Prevalence Index worksheet:
	25%	= Total Cov	er	
50% of total cover: 12.5	% 20% of	total cover:	5%	Total % Cover of: Multiply by:
Sapling Stratum (Plot size: 20'x20')				OBL species x 1 =
4. Dotulo piero	25%	YES	FACW	FACW species x 2 =
	20%	YES	FAC	FAC species x 3 =
2. Acer rubrum				FACU species x 4 =
3. Carpinus caroliniana		YES	<u>FAC</u>	UPL species x 5 =
4				Column Totals: (A) (B)
5				(1)
6				Prevalence Index = B/A =
	60%	= Total Cov	er	Hydrophytic Vegetation Indicators:
50% of total cover: <u>30%</u>				1 - Rapid Test for Hydrophytic Vegetation
	20% 01	total cover.	12 /0	2 - Dominance Test is >50%
Shrub Stratum (Plot size: 20'x20')				_
1				3 - Prevalence Index is ≤3.0 ¹
2				4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
3				Problematic Hydrophytic Vegetation¹ (Explain)
4				Problematic Hydrophytic Vegetation (Explain)
5				4
6				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
		= Total Cov	or .	
				Definitions of Five Vegetation Strata:
50% of total cover:	20% of	total cover:		Tree – Woody plants, excluding woody vines,
Herb Stratum (Plot size: 20'x20')				approximately 20 ft (6 m) or more in height and 3 in.
1. Juncus effusus	15%	YES	FACW	(7.6 cm) or larger in diameter at breast height (DBH).
2				Sapling – Woody plants, excluding woody vines,
3				approximately 20 ft (6 m) or more in height and less
4.				than 3 in. (7.6 cm) DBH.
5.				Shrub – Woody plants, excluding woody vines,
				approximately 3 to 20 ft (1 to 6 m) in height.
6				
7				Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody
8				plants, except woody vines, less than approximately 3
9				ft (1 m) in height.
10				Manada da Allana
11				Woody vine – All woody vines, regardless of height.
		= Total Cov	er	
50% of total cover: 7.5°				
	<u>70</u> 20% of	total cover:	370	
Woody Vine Stratum (Plot size: 20'x20')				
1				
2				
3				
4				
5				Hydrophytic
		= Total Cov	er	Vegetation Present? Yes X No
50% of total cover:	20% of	total cover:		Present? Yes _ ^ No
Remarks: (Include photo numbers here or on a separate sh	neet.)			1
, , , , , , , , , , , , , , , , , , , ,	,			

SOIL Sampling Point: DP-21

Profile Desc	cription: (Describe	to the dep	th needed to docu	ment the i	ndicator	or confirm	the absenc	e of inc	licators.)
Depth	Matrix			x Feature	s				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture		Remarks
0-4	10YR 3/3	100					Sandy Lo	am	
4-18	10YR 7/1	90	10YR 6/8	10	С	PL	Sandy Loa	 ım	
	-								
								_	
					-		-		
¹ Type: C=C	oncentration, D=Dep	letion. RM:	=Reduced Matrix. M	S=Masked	Sand Gr	ains.	² Location:	PL=Por	e Lining, M=Matrix.
Hydric Soil			Troudoud manny m	<u> </u>					for Problematic Hydric Soils ³ :
Histosol			Dark Surface	e (S7)					uck (A10) (MLRA 147)
	oipedon (A2)		Polyvalue Be		ce (S8) /N	ILRA 147.			Prairie Redox (A16)
	stic (A3)		Thin Dark S						RA 147, 148)
	en Sulfide (A4)		Loamy Gley			,,			nt Floodplain Soils (F19)
	d Layers (A5)		X Depleted Ma		/				RA 136, 147)
	uck (A10) (LRR N)		Redox Dark		- 6)				nallow Dark Surface (TF12)
	d Below Dark Surface	e (A11)	Depleted Da						Explain in Remarks)
	ark Surface (A12)	, ,	Redox Depr					•	,
	Mucky Mineral (S1) (L	.RR N,	Iron-Mangar			LRR N,			
	A 147, 148)		MLRA 13						
	Gleyed Matrix (S4)		Umbric Surfa	ace (F13) (MLRA 13	6, 122)	³ lr	dicators	s of hydrophytic vegetation and
Sandy R	Redox (S5)		Piedmont Fl	oodplain S	oils (F19)	(MLRA 14	18) v	vetland h	nydrology must be present,
Stripped	Matrix (S6)		Red Parent	Material (F	21) (MLR	A 127, 147	7) u	nless di	sturbed or problematic.
Restrictive	Layer (if observed):								
Type:									
	ches):						Hydric So	il Prese	ent? Yes × No
							,		
Remarks:									

Project/Site: Cumberland C	ounty Property	City/C	county: Cumberla	nd County	_ Sampling Date: <u>4/27/2018</u>
Applicant/Owner: CWV, LLC; c/	o James H. Martin			State: VA	Sampling Point: <u>DP-21, UPL</u>
Investigator(s): Shannon D. H		Section	on, Township, Range:	Tax Map #45-A	\-1
• ', -	: Hillslope	Local rel	ief (concave, convex.	none):	Slope (%): 3-5%
Subregion (LRR or MLRA): n/a					Datum:
Soil Map Unit Name: Enon-Hel			-	NWI classifi	
Are climatic / hydrologic condition				(If no, explain in F	
Are Vegetation, Soil					present? Yes X No
Are Vegetation, Soil				d, explain any answe	
Are vegetation, 30ii	, or rivurology	_ naturally problems	alic: (II fleeded	u, explain any answi	sis in Remarks.)
SUMMARY OF FINDINGS	S – Attach site ma	p showing san	npling point loca	tions, transects	s, important features, etc.
Hydrophytic Vegetation Present	? Yes	No_X	Is the Sampled Are	а	
Hydric Soil Present?	Yes	No_X	within a Wetland?		No <u> </u>
Wetland Hydrology Present?	Yes	No X			
Remarks:					
Data a sint talian adi	:				
Data point was taken ad	jacent to flag G-76.				
HYDROLOGY					
Wetland Hydrology Indicators	s:			Secondary Indic	ators (minimum of two required)
Primary Indicators (minimum of	one is required; check	all that apply)		Surface Soi	l Cracks (B6)
Surface Water (A1)	T	rue Aquatic Plants (B14)	Sparsely Ve	egetated Concave Surface (B8)
High Water Table (A2)		lydrogen Sulfide Od			atterns (B10)
Saturation (A3)			es on Living Roots (C3	-	
Water Marks (B1)		resence of Reduced	=		Water Table (C2)
Sediment Deposits (B2)			n in Tilled Soils (C6)	Crayfish Bu	
Drift Deposits (B3)		hin Muck Surface (C		· ·	/isible on Aerial Imagery (C9)
Algal Mat or Crust (B4)		Other (Explain in Rer			Stressed Plants (D1)
Iron Deposits (B5)	_	` '	,		Position (D2)
Inundation Visible on Aerial	I Imagery (B7)			Shallow Aqu	
Water-Stained Leaves (B9)					aphic Relief (D4)
Aquatic Fauna (B13)				FAC-Neutra	. , ,
Field Observations:					
	Yes No _X_ I	Depth (inches):			
	Yes No _X				
	Yes No _X !			d Hydrology Prese	nt? Yes No X
(includes capillary fringe)	165 NO _X	Deptif (inches).		a riyarology i rese	iit: les iioX
Describe Recorded Data (stream	m gauge, monitoring we	ell, aerial photos, pre	vious inspections), if a	available:	
Remarks:					
1					

/EGETATION (Five Strata) – Use scientific na	ames of _l	plants.		Sampling Point: DP-21, UPL
	Absolute	Dominant		Dominance Test worksheet:
Tree Stratum (Plot size: 20'x20')		Species?		Number of Dominant Species
1. Liriodendron tulipfera	25%	YES	FACU	That Are OBL, FACW, or FAC: 2 (A)
2. Liquidambar styraciflua	25%	YES	FAC	Total Number of Dominant
3				Species Across All Strata: 5 (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 40% (A/B)
6				Prevalence Index worksheet:
	50%	= Total Cove	ər	
50% of total cover: 25%	20% of	total cover:	10%	Total % Cover of: Multiply by:
Sapling Stratum (Plot size: 20'x20')				OBL species $0 \times 1 = 0$
1Juniperus virginiana	20%	YES	FACU	FACW species 0 $x = 0$
2. Carpinus caroliniana	15%	YES	FAC	FACUspecies 40 x 3 = 120 FACUspecies 60 x 4 = 240
3				A T = T T
4				UPL species $0 \times 5 = 0$
5				Column Totals:100 (A)360 (B)
6.	-			Prevalence Index = B/A = 3.60
6	35%	= Total Cove		Hydrophytic Vegetation Indicators:
50% of total cover: 17.5	20% of	total cover:	1%	1 - Rapid Test for Hydrophytic Vegetation
Shrub Stratum (Plot size: 20'x20')				2 - Dominance Test is >50%
1				3 - Prevalence Index is ≤3.0 ¹
2				4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
3				Problematic Hydrophytic Vegetation¹ (Explain)
4				Ploblematic Hydrophytic vegetation (Explain)
5				1
6				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
		= Total Cove	er	Definitions of Five Vegetation Strata:
50% of total cover:	 20% of	total cover:		
Herb Stratum (Plot size: 20'x20')	20 /0 0.	lotal cover.		Tree – Woody plants, excluding woody vines,
Polystichum acrostichoides	15%	VES	EACH	approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).
			· ·	
2				Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less
3				than 3 in. (7.6 cm) DBH.
4				
5				Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.
6				approximately 3 to 20 ft (1 to 6 fil) in neight.
7				Herb – All herbaceous (non-woody) plants, including
8				herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3
9				ft (1 m) in height.
10				Manadavina All woody vince regardless of height
11				Woody vine – All woody vines, regardless of height.
		= Total Cove	er	
50% of total cover: _7.5%				
Woody Vine Stratum (Plot size: 20'x20')		10101 00.0	0,0	
1				
2				
3				
4				
5				Hydrophytic
		= Total Cove	ər	Vegetation
50% of total cover:	20% of	total cover:		Present? Yes No_X
Remarks: (Include photo numbers here or on a separate s				
remarks. (include photo numbers here of on a separate s	nieet.)			

Sampling Point: DP-21, UPL

Profile Desc	ription: (Describe	to the dept	h needed to docun	ent the ir	ndicator o	or confirm	n the absence of indicators.)
Depth	Matrix		Redox	(Features	}		
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture Remarks
0-4	10YR 5/3	100					Sandy Loam_
4-12	10YR 5/4	100					Sandy Loam
12-18	10YR 5/4	100					Sandy Clay Loam
		· <u></u>					
		<u> </u>					
¹Type: C=Co	oncentration, D=Dep	letion RM-	Reduced Matrix MS		Sand Gra	ins	² Location: PL=Pore Lining, M=Matrix.
Hydric Soil I		iouon, ruvi–	reduced Matrix, Me		Odrid Ord		Indicators for Problematic Hydric Soils ³ :
Histosol			Dark Surface	(S7)			2 cm Muck (A10) (MLRA 147)
	pipedon (A2)		Polyvalue Be		e (S8) (M	LRA 147,	
Black His			Thin Dark Su				(MLRA 147, 148)
Hydroge	n Sulfide (A4)		Loamy Gleye	d Matrix (F	- 2)		Piedmont Floodplain Soils (F19)
	Layers (A5)		Depleted Mat				(MLRA 136, 147)
	ck (A10) (LRR N)		Redox Dark S	,	•		Very Shallow Dark Surface (TF12)
	Below Dark Surfac	e (A11)	Depleted Dar				Other (Explain in Remarks)
	ark Surface (A12)	DD N	Redox Depre			DD N	
	lucky Mineral (S1) (L . 147, 148)	_KK N,	Iron-Mangane MLRA 136		S (F12) (L	KK N,	
	leyed Matrix (S4)		Umbric Surfa	•	MLRA 13	6. 122)	³ Indicators of hydrophytic vegetation and
	edox (S5)		Piedmont Flo				
	Matrix (S6)		Red Parent M				
	ayer (if observed):			•		-	· ·
Type:							
Depth (inc	ches):		<u></u>				Hydric Soil Present? Yes No X
Remarks:							l

Project/Site: Cumberland County	Property C	ity/County: Cumberlan	d County	Sampling Date: 4/27/2018
Applicant/Owner: CWV, LLC; c/o James H				Sampling Point: DP-22
Investigator(s): Shannon D. Hill	S	ection, Township, Range: _	Tax Map # 38-	4-7
Landform (hillslope, terrace, etc.): Floo	dplain Loca	I relief (concave, convex, no	one).	Slope (%):0-2%
		Long: -78	8.113771911	Datum:
Soil Map Unit Name: Cecil sandy clay				cation: PFO
Are climatic / hydrologic conditions on th			(If no, explain in F	
				present? Yes X No
Are Vegetation, Soil, or H				
Are Vegetation, Soil, or F	hydrology naturally prob	iematic? (If needed,	explain any answe	ers in Remarks.)
SUMMARY OF FINDINGS – At	tach site map showing s	sampling point locati	ons, transects	s, important features, etc.
Hydrophytic Vegetation Present?	Yes X No	Is the Sampled Area		
Hydric Soil Present?	Yes X No	within a Wetland?	$_{Yes}$ $ imes$	No
Wetland Hydrology Present?	Yes X No			
Remarks:				
Data point was taken next to fl	ag G-224.			
HYDROLOGY				
Wetland Hydrology Indicators:			Secondary Indica	ators (minimum of two required)
Primary Indicators (minimum of one is	required: check all that apply)		Surface Soil	• •
Surface Water (A1)	True Aquatic Plar	nts (B14)		getated Concave Surface (B8)
High Water Table (A2)	Hydrogen Sulfide		X Drainage Pa	
Saturation (A3)		pheres on Living Roots (C3)		
Water Marks (B1)	Presence of Red			Water Table (C2)
Sediment Deposits (B2)		uction in Tilled Soils (C6)	Crayfish Bur	
Octament Deposits (B2) Drift Deposits (B3)	Thin Muck Surface			isible on Aerial Imagery (C9)
Algal Mat or Crust (B4)	Other (Explain in			stressed Plants (D1)
Iron Deposits (B5)	Outer (Explain III	rtomantoj	X Geomorphic	
Inundation Visible on Aerial Image	rv (B7)		Shallow Aqu	
X Water-Stained Leaves (B9)	(27)			aphic Relief (D4)
Aquatic Fauna (B13)			FAC-Neutra	
Field Observations:				1 1001 (20)
	No X Depth (inches):			
	X No Depth (inches):			
	No X Depth (inches):		Uvdralagy Drago	nt? Yes X No
Saturation Present? Yes (includes capillary fringe)	No _X Depth (inches):	wetiand	nyarology Prese	nt? Yes /\ NO
Describe Recorded Data (stream gaug	e, monitoring well, aerial photos.	, previous inspections), if av	ailable:	
Remarks:				

/EGETATION (Five Strata) – Use scientific na	mes of	plants.		Sampling Point: DP-22
201-201	Absolute	Dominant		Dominance Test worksheet:
Tree Stratum (Plot size: 20'x20')		Species?		Number of Dominant Species
1. Acer rubrum	20%	<u>YES</u>	<u>FAC</u>	That Are OBL, FACW, or FAC:5 (A)
2				Total Number of Dominant
3				Species Across All Strata: 7 (B)
4				Dergant of Deminant Species
5				Percent of Dominant Species That Are OBL, FACW, or FAC: 71% (A/B)
6				
	20%	= Total Cove	er	Prevalence Index worksheet:
50% of total cover:10%				Total % Cover of: Multiply by:
Sapling Stratum (Plot size: 20'x20')	20 /0 01	luiai covoi.		OBL species x 1 =
	15%	YES	FAC	FACW species x 2 =
1. Acer rubrum				FAC species x 3 =
2. Juniperus virginiana	10%	YES	FACU	FACU species x 4 =
3. Carpinus caroliana		YES	<u>FAC</u>	UPL species x 5 =
4				Column Totals: (A) (B)
5				(,,
6				Prevalence Index = B/A =
	35%	= Total Cove	er	Hydrophytic Vegetation Indicators:
50% of total cover: <u>17.5</u> °	% 20% of	total cover:	7%	1 - Rapid Test for Hydrophytic Vegetation
Shrub Stratum (Plot size: 20'x20')	<u>/ 2</u> 20 / 0 01	total cover.	. , ,	2 - Dominance Test is >50%
				3 - Prevalence Index is ≤3.0 ¹
1				4 - Morphological Adaptations ¹ (Provide supporting
2				data in Remarks or on a separate sheet)
3				Problematic Hydrophytic Vegetation ¹ (Explain)
4				
5				¹ Indicators of hydric soil and wetland hydrology must
6				be present, unless disturbed or problematic.
		= Total Cove	ər	Definitions of Five Vegetation Strata:
50% of total cover:	20% of	total cover:		_
Herb Stratum (Plot size: 20'x20')				Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in.
1. Kalmia latifolia	20%	YES	FACU	(7.6 cm) or larger in diameter at breast height (DBH).
O lungua officeus	10%	YES	FACW	
	10 /0	TES	FACVV	Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less
3				than 3 in. (7.6 cm) DBH.
4		-		
5				Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.
6				approximately 3 to 20 ft (1 to 6 ff) in neight.
7				Herb – All herbaceous (non-woody) plants, including
8				herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3
9				ft (1 m) in height.
10				
11				Woody vine – All woody vines, regardless of height.
	30%	= Total Cove	<u></u>	
150				
50% of total cover: 15%	20% of	total cover:	0 70	
Woody Vine Stratum (Plot size: 20'x20')	. = 0.			
1. Smilax rotundifolia	15%	YES_	FAC	
2				
3				
4				
5				Hadron bod's
	15%	= Total Cove	er	Hydrophytic Vegetation
50% of total cover: 7.5%				Present? Yes X No
		total cover:		
Remarks: (Include photo numbers here or on a separate sl	neet.)			

SOIL Sampling Point: DP-22

Profile Desc	ription: (Describe	to the dept	th needed to docum	nent the i	ndicator	or confirm	the absence of indicators.)
Depth	Matrix		Redo	x Feature:	s		
(inches)	Color (moist)	<u>%</u>	Color (moist)	%	Type ¹	Loc ²	Texture Remarks
0-6	10YR 3/2	100			-		Sandy Loam
6-18	10YR 6/2	85	7.5YR 5/6	15	С	PL	Sandy Loam
					-		
	-						
		·	·	·	·		
		· 			-		
1 _T 0. 0.	tustian D Dan	lation DM	Deduced Metric MC	- Maalaa			21 continue DI Describing M Matrix
Hydric Soil	oncentration, D=Dep	letion, Rivi=	Reduced Matrix, MS	s=iviasked	Sand Gra	ains.	² Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils ³ :
_			Davis Confess	(07)			-
Histosol	oipedon (A2)		Dark Surface		oo (CO) (N	II D A 4.47	2 cm Muck (A10) (MLRA 147)
Histic Ep			Polyvalue Be Thin Dark Su				148) Coast Prairie Redox (A16) (MLRA 147, 148)
	en Sulfide (A4)		Loamy Gleye			47, 140)	Piedmont Floodplain Soils (F19)
	d Layers (A5)		Z Depleted Mar	,	1 2)		(MLRA 136, 147)
	ick (A10) (LRR N)		Redox Dark	. ,	- 6)		Very Shallow Dark Surface (TF12)
	d Below Dark Surface	e (A11)	Depleted Dar	,	,		Other (Explain in Remarks)
	ark Surface (A12)	, ,	Redox Depre				
Sandy M	lucky Mineral (S1) (L	.RR N,	Iron-Mangan	ese Mass	es (F12) (LRR N,	
MLRA	A 147, 148)		MLRA 13	6)			
	Bleyed Matrix (S4)		Umbric Surfa				³ Indicators of hydrophytic vegetation and
	Redox (S5)		Piedmont Flo				
	Matrix (S6)		Red Parent N	Material (F	21) (MLR	A 127, 147	y) unless disturbed or problematic.
	Layer (if observed):						
Type:			<u></u>				
Depth (in	ches):						Hydric Soil Present? Yes X No No
Remarks:							

Project/Site: Cumberland Count	y Property	City/County:	Cumberland	d County	Sampling Date: 4/27/2018
Applicant/Owner: CWV, LLC; c/o Jan					Sampling Point: <u>DP-22, UPL</u>
Investigator(s): Shannon D. Hill		Section, Town	ship, Range:	Tax Map #38-A-	<u>-</u>
Landform (hillslope, terrace, etc.): Hill	slope	Local relief (conc	ave. convex. no	one):	Slope (%): 4-6%
	Lat:37.5				Datum:
Soil Map Unit Name: Cecil sandy loa			_	NWI classifica	
Are climatic / hydrologic conditions on t				(If no, explain in Re	
Are Vegetation, Soil, or			Are "Norma		resent? Yes X No
Are Vegetation, Soil, or				explain any answer	
, 1	,	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	(. , ,	,
SUMMARY OF FINDINGS – A	ttach site map sho	owing sampling	point location	ons, transects,	important features, etc.
Hydrophytic Vegetation Present?	Yes No_>	×			
Hydric Soil Present?	Yes No_>	10 1110 1	Sampled Area a Wetland?	Yes	No <u>X</u>
Wetland Hydrology Present?	Yes No _>				
Remarks:					
Data point was taken adjacer	it to flag G-224.				
LIVEROLOGY					
HYDROLOGY Westend Hydrology Indicators				Casandan Indiaat	tore (minimum of two required)
Wetland Hydrology Indicators:	and the second second second second second			•	tors (minimum of two required)
Primary Indicators (minimum of one is				Surface Soil (
Surface Water (A1)		juatic Plants (B14)			etated Concave Surface (B8)
High Water Table (A2)		en Sulfide Odor (C1) d Rhizospheres on Liv	ring Poots (C2)	Drainage Patt	
Saturation (A3)					
Water Marks (B1) Sediment Deposits (B2)		ce of Reduced Iron (Co Iron Reduction in Tille		Crayfish Burro	Vater Table (C2)
Orift Deposits (B3)		ick Surface (C7)	a 30113 (CO)		sible on Aerial Imagery (C9)
Algal Mat or Crust (B4)		Explain in Remarks)			ressed Plants (D1)
Iron Deposits (B5)	0 (2			Geomorphic I	
Inundation Visible on Aerial Imag	ery (B7)			Shallow Aquit	
Water-Stained Leaves (B9)	, ,				phic Relief (D4)
Aquatic Fauna (B13)				FAC-Neutral	
Field Observations:					
	No X Depth	(inches):			
	No X Depth				
	No X Depth		Wetland	Hydrology Present	t? Yes No X
(includes capillary fringe)					
Describe Recorded Data (stream gau	ge, monitoring well, aeria	al photos, previous ins	spections), if ava	ailable:	
Remarks:					

/EGETATION (Five Strata) – Use scientific na	ımes of	plants.		Sampling Point: DP-22, UPL
201.001	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 20'x20')	% Cover	Species?	Status	Number of Dominant Species
1. Liriodendron tulipfera	25%	YES	FACU	That Are OBL, FACW, or FAC: 0 (A)
2. Pinus taeda	20%	YES	FACU	Total Number of Dominant
3. Quercus alba	15%	YES	FACU	Species Across All Strata: 5 (B)
4				D (Describer of Original Co.
5				Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)
6				111017110 0002, 171011, 011710.
	60%	= Total Cove	er	Prevalence Index worksheet:
50% of total cover: 30%				Total % Cover of: Multiply by:
Sapling Stratum (Plot size: 20'x20')	20 /0 01	lulai cover.		OBL species 0 x 1 = 0
4. Querque elha	20%	YES	FACU	FACW species <u>0</u> x 2 = <u>0</u>
2. Juniperus virginiana	20%	YES	FACU	FAC species <u>0</u> x 3 = <u>90</u>
				FACU species 100 x 4 = 400
3				UPL species x 5 =0
4				Column Totals: (A) (B)
5				4.00
6				Prevalence Index = B/A = 4.00
		= Total Cove		Hydrophytic Vegetation Indicators:
50% of total cover: 20%	20% of	total cover:	8%	1 - Rapid Test for Hydrophytic Vegetation
Shrub Stratum (Plot size: 20'x20')				2 - Dominance Test is >50%
1				3 - Prevalence Index is ≤3.0 ¹
2				4 - Morphological Adaptations ¹ (Provide supporting
3				data in Remarks or on a separate sheet)
4				Problematic Hydrophytic Vegetation ¹ (Explain)
5				
6				¹ Indicators of hydric soil and wetland hydrology must
<u>. </u>		= Total Cove		be present, unless disturbed or problematic.
700 % of total account				Definitions of Five Vegetation Strata:
50% of total cover:	20% or	total cover:		Tree – Woody plants, excluding woody vines,
Herb Stratum (Plot size: 20'x20')				approximately 20 ft (6 m) or more in height and 3 in.
1				(7.6 cm) or larger in diameter at breast height (DBH).
2				Sapling - Woody plants, excluding woody vines,
3				approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.
4				(nan 3 in. (7.6 cm) DDi i.
5				Shrub – Woody plants, excluding woody vines,
6				approximately 3 to 20 ft (1 to 6 m) in height.
7				Herb – All herbaceous (non-woody) plants, including
8		· <u></u>		herbaceous vines, regardless of size, and woody
9				plants, except woody vines, less than approximately 3 ft (1 m) in height.
10				
11				Woody vine – All woody vines, regardless of height.
		= Total Cove	er	
FOO/ of total agreem				
50% of total cover:	20% 01	total cover.		
Woody Vine Stratum (Plot size: 20'x20') 1. Smilax rotundifolia				
		· · · · · · · · · · · · · · · · · · ·	·	
2				
3				
4				
5				Hydrophytic
		= Total Cove	er	Vegetation
50% of total cover:	20% of	total cover:		Present? Yes No_X
Remarks: (Include photo numbers here or on a separate sl		-		
(,,			

Sampling Point: DP-22, UPL

Depth	Matrix		Redox Features	- Toutons Bounds
(inches)	Color (moist)	<u>%</u>	Color (moist) % Type ¹ Loc ²	
0-4	10YR 5/3	100		Sandy Loam_
4-18	2.5Y 6/4	100		Sandy Loam
_				
				-
		pletion, RM=R	educed Matrix, MS=Masked Sand Grains.	² Location: PL=Pore Lining, M=Matrix.
dric Soil I	ndicators:			Indicators for Problematic Hydric Soils ³ :
_ Histosol			Dark Surface (S7)	2 cm Muck (A10) (MLRA 147)
	ipedon (A2)		Polyvalue Below Surface (S8) (MLRA 14	
_ Black His			Thin Dark Surface (S9) (MLRA 147, 148	
	n Sulfide (A4) Layers (A5)		Loamy Gleyed Matrix (F2)Depleted Matrix (F3)	Piedmont Floodplain Soils (F19) (MLRA 136, 147)
	ck (A10) (LRR N)		Redox Dark Surface (F6)	Very Shallow Dark Surface (TF12)
	Below Dark Surfa	ce (A11)	Depleted Dark Surface (F7)	Other (Explain in Remarks)
	rk Surface (A12)	,	Redox Depressions (F8)	
	ucky Mineral (S1)	(LRR N,	Iron-Manganese Masses (F12) (LRR N,	
MLRA	147, 148)		MLRA 136)	
	leyed Matrix (S4)		Umbric Surface (F13) (MLRA 136, 122)	³ Indicators of hydrophytic vegetation and
	edox (S5)		Piedmont Floodplain Soils (F19) (MLRA	
	Matrix (S6)		Red Parent Material (F21) (MLRA 127, 1	unless disturbed or problematic.
	ayer (if observed):		
Typo:			<u> </u>	
Туре:				Hydric Soil Present? Yes No X
	:hes):		_	Trydrio doi: 1 tos 1 to
Depth (inc	ches):		_	Tryano con ricocini.
Depth (inc	hes):		_	Tryano con ricocnic.
Depth (inc	hes):		_	Tryano con ricocnic.
Depth (inc	hes):		_	injunio com ricocini.
Depth (inc	hes):			injunio com ricocini.
Depth (inc	hes):		-	injunio com ricocini.
Depth (inc	hes):		-	injunio com ricocini.
Depth (inc	hes):			injunio com ricocini.
Depth (inc	hes):			injunio com ricocini.
Depth (inc	hes):			injunio com ricocini.
Depth (inc	hes):			injunio con i resoluti.
Depth (inc	hes):			III III III III III III III III III II
Depth (inc	hes):			III III III III III III III III III II
Depth (inc	hes):			inguino con i resourci.
Depth (inc	ches):			inguino con i resourci.
Depth (inc	ches):			inguing contribution.
	ehes):			inguing contribution.
Depth (inc	ehes):			inguing contribution.
Depth (inc	ehes):			inguing contribution.
Depth (inc	ehes):			ing ing contribution.
Depth (inc	ehes):			Tryuno con ricocani.
Depth (inc	ehes):			Tryuno con ricocani.

Project/Site: Cumberland County	Property Ci	ity/County: Cumberland	d County	Sampling Date: 4/30/2018
Applicant/Owner: CWV, LLC; c/o James	H. Martin		State: VA	Sampling Point: DP-23
Investigator(s): Shannon D. Hill	S	ection, Township, Range:	Tax Map # 38-A	
Landform (hillslope, terrace, etc.): Floor	dplain Loca	I relief (concave, convex, no	one):	Slope (%): 0-2%
Subregion (LRR or MLRA): n/a				
Soil Map Unit Name: Poindexter Wedo			NWI classific	
Are climatic / hydrologic conditions on the		·? Yes X No	(If no, explain in R	
Are Vegetation, Soil, or H		isturbed? Are "Norma		oresent? Yes X No
Are Vegetation, Soil, or H			explain any answe	
SUMMARY OF FINDINGS – At	tach site map showing s	sampling point location	ons, transects	, important features, etc.
Hydrophytic Vegetation Present?	Yes X No			
Hydric Soil Present?	Yes X No	Is the Sampled Area within a Wetland?	_{Yes} X	No
Wetland Hydrology Present?	Yes X No			
Remarks:				
Data point was taken next to fla	ag G-311.			
HYDROLOGY				
Wetland Hydrology Indicators:			Secondary Indica	tors (minimum of two required)
Primary Indicators (minimum of one is r	equired: check all that apply)		Surface Soil	
Surface Water (A1)	True Aquatic Plar	nts (B14)	· · · · · · · · · · · · · · · · · · ·	getated Concave Surface (B8)
High Water Table (A2)	Hydrogen Sulfide		X Drainage Pat	
Saturation (A3)		pheres on Living Roots (C3)	X Moss Trim Li	
Water Marks (B1)	Presence of Redu	= : :		Water Table (C2)
Sediment Deposits (B2)		uction in Tilled Soils (C6)	Crayfish Burr	
Drift Deposits (B3)	Thin Muck Surface	ce (C7)	Saturation Vi	sible on Aerial Imagery (C9)
Algal Mat or Crust (B4)	Other (Explain in	Remarks)	Stunted or St	tressed Plants (D1)
Iron Deposits (B5)			X Geomorphic	Position (D2)
Inundation Visible on Aerial Imager	y (B7)		Shallow Aqui	itard (D3)
X Water-Stained Leaves (B9)			Microtopogra	phic Relief (D4)
Aquatic Fauna (B13)			FAC-Neutral	Test (D5)
Field Observations:				
	No X Depth (inches): _			
<u> </u>	✓ No Depth (inches): _			
	No X Depth (inches):	Wetland I	Hydrology Presen	t? Yes X No
(includes capillary fringe) Describe Recorded Data (stream gauge	e, monitoring well, aerial photos,	previous inspections), if ava	ailable:	
, , ,		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		
Remarks:				

/EGETATION (Five Strata) – Use scientific na	ames of	plants.		Sampling Point: DP-23
201-201	Absolute	Dominant		Dominance Test worksheet:
Tree Stratum (Plot size: 20'x20')		Species?		Number of Dominant Species
1. Carpinus caroliniana	15%	<u>YES</u>	<u>FAC</u>	That Are OBL, FACW, or FAC: 6 (A)
2. Acer rubrum	15%	<u>YES</u>	FAC	Total Number of Dominant
3. Liquidambar styraciflua	15%	YES	FAC	Species Across All Strata: 6 (B)
4				
5				Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)
6				That Are OBL, FACW, OF FAC.
o	450/	= Total Cove		Prevalence Index worksheet:
00.7				Total % Cover of: Multiply by:
50% of total cover: 22.5	20% of	total cover:	9%	OBL species x 1 =
Sapling Stratum (Plot size: 20'x20')				FACW species x 2 =
1. Acer rubrum	15%	YES	FACW	FAC species x 3 =
2				
3				FACU species x 4 =
4				UPL species x 5 =
				Column Totals: (A) (B)
5	-	· 		Decorder of Indian D/A
6	150/			Prevalence Index = B/A =
		= Total Cove		Hydrophytic Vegetation Indicators:
50% of total cover: <u>7.5%</u>	<u>,</u> 20% of	total cover:	3%	1 - Rapid Test for Hydrophytic Vegetation
Shrub Stratum (Plot size: 20'x20'				✓ 2 - Dominance Test is >50%
1. Vaccinium corymbosum	20%	YES	FACW	3 - Prevalence Index is ≤3.0 ¹
2				4 - Morphological Adaptations ¹ (Provide supporting
				data in Remarks or on a separate sheet)
3				Problematic Hydrophytic Vegetation ¹ (Explain)
4				
5		· 		¹ Indicators of hydric soil and wetland hydrology must
6		·		be present, unless disturbed or problematic.
	20%	= Total Cove	er	Definitions of Five Vegetation Strata:
50% of total cover: <u>10%</u>	20% of	total cover:	4%	-
Herb Stratum (Plot size: 20'x20')				Tree – Woody plants, excluding woody vines,
1. Athyrium angustum	20%	YES	FAC	approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).
2				Sapling – Woody plants, excluding woody vines,
3		· 		approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.
4				undir o mi. (1.0 din) BBTI.
5				Shrub – Woody plants, excluding woody vines,
6				approximately 3 to 20 ft (1 to 6 m) in height.
7				Herb – All herbaceous (non-woody) plants, including
8				herbaceous vines, regardless of size, and woody
9				plants, except woody vines, less than approximately 3 ft (1 m) in height.
10				
				Woody vine – All woody vines, regardless of height.
11				
		= Total Cove		
50% of total cover:10	<u>%</u> 20% of	total cover:	4%	
Woody Vine Stratum (Plot size: 20'x20')				
1				
2				
3				
4		· 		
5		· 		Hydrophytic
		= Total Cove	er	Vegetation
50% of total cover:	20% of	total cover		Present? Yes X No
Remarks: (Include photo numbers here or on a separate s				
ixemarks. (include prioto numbers here or on a separate s	ilieet.)			

SOIL Sampling Point: DP-23

Profile Desc	ription: (Describe	to the dept	th needed to docun	nent the i	ndicator	or confirm	the absence of indicators.)			
Depth	Matrix		Redo	x Feature:	s					
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture Remarks			
0-4	10YR 3/3	100			-		Sandy Loam			
4-18	10YR 7/2	90	5YR 5/8	10	С	PL	Sandy Loam			
		· 			-					
	-									
		· 			-					
1- 0.0							21			
Hydric Soil	oncentration, D=Dep	letion, RM=	Reduced Matrix, MS	s=Masked	Sand Gra	ains.	² Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils ³ :			
_			D 10 ((07)			-			
Histosol			Dark Surface		(CO) (N	U D A 447	2 cm Muck (A10) (MLRA 147)			
	pipedon (A2)		Polyvalue Be							
Black Hi	en Sulfide (A4)		Thin Dark Su Loamy Gleye			47, 140)	(MLRA 147, 148) Piedmont Floodplain Soils (F19)			
	d Layers (A5)		Z Depleted Mat	,	r <i>z)</i>		(MLRA 136, 147)			
	ick (A10) (LRR N)		Redox Dark S	. ,	·6)		Very Shallow Dark Surface (TF12)			
	d Below Dark Surface	e (A11)	Depleted Dar	,	,		Other (Explain in Remarks)			
	ark Surface (A12)	- (Redox Depre							
	lucky Mineral (S1) (L	.RR N,	Iron-Mangan			LRR N,				
MLRA	A 147, 148)		MLRA 13	6)						
	Bleyed Matrix (S4)		Umbric Surfa				³ Indicators of hydrophytic vegetation and			
	Redox (S5)		Piedmont Flo							
	Matrix (S6)		Red Parent N	/laterial (F	21) (MLR	A 127, 147	7) unless disturbed or problematic.			
Restrictive I	Layer (if observed):									
Type:										
Depth (in	ches):		<u> </u>				Hydric Soil Present? Yes X No No			
Remarks:							•			

Project/Site: Cumberland Cour	nty Property	City/County:	Cumberland	d County	Sampling Date: 4/30/2018
Applicant/Owner: CWV, LLC; c/o Ja	ames H. Martin			State: VA	Sampling Point: DP-23, UPL
Investigator(s): Shannon D. Hill		Section, Towns	ship, Range:	Tax Map #38-A-	7
Landform (hillslope, terrace, etc.): H	illslope	Local relief (conca	ave, convex, noi	ne):	Slope (%): 2-4%
Subregion (LRR or MLRA):n/a					
Soil Map Unit Name: Poindexter W			<u> </u>	NWI classifica	
Are climatic / hydrologic conditions on		ne of year? Yes X	No	 (If no, explain in Re	
Are Vegetation, Soil,					esent? Yes X No
Are Vegetation, Soil,				explain any answers	
, , , , , , , , , , , , , , , , , , ,		, p	(,		- ·····-·,
SUMMARY OF FINDINGS –	Attach site map sh	owing sampling _l	point location	ons, transects,	important features, etc.
Hydrophytic Vegetation Present?	Yes No	X	`a		
Hydric Soil Present?	Yes No_>	X within a	Sampled Area a Wetland?	Yes	No <u>X</u>
Wetland Hydrology Present?	Yes No _>	×			
Remarks:					
Data point was taken adjace	Int to flag G-311.				
HYDROLOGY					
Wetland Hydrology Indicators:				Secondary Indicat	ors (minimum of two required)
Primary Indicators (minimum of one	is required: check all that	annly)		Surface Soil C	
Surface Water (A1)	-	quatic Plants (B14)			etated Concave Surface (B8)
High Water Table (A2)		en Sulfide Odor (C1)		Drainage Patt	
Saturation (A3)	· -	d Rhizospheres on Livi	ing Roots (C3)	Moss Trim Lir	
Water Marks (B1)		ce of Reduced Iron (C4			Vater Table (C2)
Sediment Deposits (B2)		Iron Reduction in Tilled		Crayfish Burro	
Drift Deposits (B3)		uck Surface (C7)	` ,	-	ible on Aerial Imagery (C9)
Algal Mat or Crust (B4)		Explain in Remarks)			essed Plants (D1)
Iron Deposits (B5)				Geomorphic F	
Inundation Visible on Aerial Ima	gery (B7)			Shallow Aquit	ard (D3)
Water-Stained Leaves (B9)				Microtopograp	phic Relief (D4)
Aquatic Fauna (B13)				FAC-Neutral	Test (D5)
Field Observations:					
Surface Water Present? Yes	No X Depth	(inches):			
	No X Depth				
Saturation Present? Yes	No X Depth	(inches):	Wetland H	Hydrology Present	? Yes NoX_
(includes capillary fringe) Describe Recorded Data (stream ga	unae monitorina well aeri	al nhotos previous ins	nections) if ava	ailahle.	
Besonse Resorded Bala (Stream ga	age, morntoning wen, acri	ai priotos, previous iris	poonons), ii ave	andbio.	
Remarks:					
Komarks.					

/EGETATION (Five Strata) – Use scientific na	ımes of ı	plants.		Sampling Point: DP-23, UPL
201.001	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 20'x20')	% Cover	Species?	Status	Number of Dominant Species
1. Quercus alba	25%	YES	FACU	That Are OBL, FACW, or FAC: 0 (A)
2. Liriodendron tulipfera	25%	YES	FACU	Total Number of Dominant
3. Quercus velutina	20%	YES	<u>FACU</u>	Species Across All Strata: 5 (B)
4				D. and of Description & Constitution
5				Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)
6				(100)
	70%	= Total Cove	er	Prevalence Index worksheet:
50% of total cover: _30%				Total % Cover of: Multiply by:
Sapling Stratum (Plot size: 20'x20')	20 /0 01	lulai cover.		OBL species 0 x 1 = 0
4 Juniparus virginians	20%	VEC	FACU	FACW species <u>0</u> x 2 = <u>0</u>
2. Quercus alba	10%	YES		FAC species <u>0</u> x 3 = <u>0</u>
		· · ·	FACU	FACU species 100 x 4 = 400
3				UPL species x 5 =0
4		. ———		Column Totals: (A) (B)
5				4.00
6				Prevalence Index = B/A = 4.00
		= Total Cove		Hydrophytic Vegetation Indicators:
50% of total cover: 15%	20% of	total cover:	6%	1 - Rapid Test for Hydrophytic Vegetation
Shrub Stratum (Plot size: 20'x20'				2 - Dominance Test is >50%
1				3 - Prevalence Index is ≤3.0 ¹
2				4 - Morphological Adaptations ¹ (Provide supporting
3				data in Remarks or on a separate sheet)
4				Problematic Hydrophytic Vegetation ¹ (Explain)
5				
6				¹ Indicators of hydric soil and wetland hydrology must
0		= Total Cove	or.	be present, unless disturbed or problematic.
				Definitions of Five Vegetation Strata:
50% of total cover:	20% of	total cover:		Tree – Woody plants, excluding woody vines,
Herb Stratum (Plot size: 20'x20')				approximately 20 ft (6 m) or more in height and 3 in.
1				(7.6 cm) or larger in diameter at breast height (DBH).
2				Sapling – Woody plants, excluding woody vines,
3				approximately 20 ft (6 m) or more in height and less
4				than 3 in. (7.6 cm) DBH.
5		· <u></u>		Shrub – Woody plants, excluding woody vines,
6		. <u></u>		approximately 3 to 20 ft (1 to 6 m) in height.
7				Herb – All herbaceous (non-woody) plants, including
8				herbaceous vines, regardless of size, and woody
9				plants, except woody vines, less than approximately 3 ft (1 m) in height.
10				
11				Woody vine – All woody vines, regardless of height.
		= Total Cove		
50% of total cover:	20% of	total cover:		
Woody Vine Stratum (Plot size: 20'x20')				
1				
2				
3				
4				
5		· <u></u>		Liverantic
		= Total Cove	er	Hydrophytic Vegetation
50% of total cover:	20% of	total cover		Present? Yes No_X
		total cover.		
Remarks: (Include photo numbers here or on a separate si	ieet.)			

Sampling Point: DP-23, UPL

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist) % Type ¹	Loc ²	Texture		Remarl	ko
0-4	10YR 5/4	100	Color (moist) // Type	LUC			Neman	NS
	-				Sandy L			
4-18	10YR 6/4	100			Sandy C.	<u>Loam</u>		
_								
	noontration D_Day	olotion DM	Reduced Matrix, MS=Masked Sand Grain		² l coation	: PL=Pore Lir	ina M-Mot	riv
	Indicators:	pietion, Rivi=	Reduced Matrix, MS=Masked Sand Grain	15.				Hydric Soils ³ :
_ Histosol			Dark Surface (S7)			_ 2 cm Muck		-
	oipedon (A2)		Polyvalue Below Surface (S8) (ML	RA 147.	148)	Coast Prairi		
Black His			Thin Dark Surface (S9) (MLRA 147			(MLRA 1		,
	n Sulfide (A4)		Loamy Gleyed Matrix (F2)	•		_ Piedmont F		oils (F19)
Stratified	d Layers (A5)		Depleted Matrix (F3)			(MLRA 1	36, 147)	
	ick (A10) (LRR N)		Redox Dark Surface (F6)		_	_ Very Shallo		
	d Below Dark Surfac	ce (A11)	Depleted Dark Surface (F7)		_	Other (Explanation	ain in Rema	rks)
	ark Surface (A12)	I DD N	Redox Depressions (F8)	ND N				
	lucky Mineral (S1) (\ 147, 148)	LKK N,	Iron-Manganese Masses (F12) (LF MLRA 136)	KK N,				
	Gleyed Matrix (S4)		Umbric Surface (F13) (MLRA 136,	122)		Indicators of h	ovdrophytic	vegetation and
	tedox (S5)		Piedmont Floodplain Soils (F19) (N			wetland hydr		-
						unless disturl		
Stripped	Matrix (S6)		Red Parent Material (FZT) (MLRA	121, 171				
_ Stripped estrictive L	_ayer (if observed)):	Red Parent Material (F21) (MLRA	121, 171	, 			
				127, 147				
estrictive L	_ayer (if observed)			121, 141		Soil Present?	Yes	No_×
Type: Depth (inc	_ayer (if observed)			127, 147			Yes	No ×
Type: Depth (inc	_ayer (if observed)						Yes	No <u>×</u>
Type: Depth (inc	_ayer (if observed)			121, 171			Yes	No_X
Type: Depth (inc	_ayer (if observed)			121, 141			Yes	No <u>×</u>
Type: Depth (inc	_ayer (if observed)			121, 141			Yes	No <u>×</u>
Type: Depth (inc	_ayer (if observed)			121, 141			Yes	No <u>×</u>
Type: Depth (inc	_ayer (if observed)			121, 141			Yes	No <u>×</u>
Type: Depth (inc	_ayer (if observed)			121, 141			Yes	No <u></u> ×
Type: Depth (inc	_ayer (if observed)			121, 141			Yes	No <u>×</u>
Type: Depth (inc	_ayer (if observed)			121, 141			Yes	No <u>×</u>
Type: Depth (inc	_ayer (if observed)			121, 141			Yes	No <u></u> ×
Type: Depth (inc	_ayer (if observed)			121, 141			Yes	No <u></u> ×
Type: Depth (inc	_ayer (if observed)			121, 131			Yes	No <u></u> ×
Type: Depth (inc	_ayer (if observed)			121, 131			Yes	No X
Type: Depth (inc	_ayer (if observed)			121, 131			Yes	No <u>×</u>
Type: Depth (inc	_ayer (if observed)			121, 141			Yes	No X
estrictive L	_ayer (if observed)						Yes	No X
estrictive L Type: Depth (inc	_ayer (if observed)			121, 131			Yes	No X
estrictive L Type: Depth (inc	_ayer (if observed)						Yes	No X
estrictive L Type: Depth (inc	_ayer (if observed)						Yes	No X
Type: Depth (inc	_ayer (if observed)						Yes	No X
estrictive L Type: Depth (inc	_ayer (if observed)						Yes	No X

Project/Site: Cumberland	County Property	City/C	county: Cumberla	nd County	Sampling Date: 4/30/2018
Applicant/Owner: CWV, LLC;			,		Sampling Point: DP-24
Investigator(s): Shannon D		Section	on, Township, Range:		——————————————————————————————————————
	tc.): Floodplain	L ocal reli	ef (concave, convex, r	none):	Slope (%):1-3%
Subregion (LRR or MLRA):					Datum:
Soil Map Unit Name: Chewa	cla and Monocan soils/	Poindexter Wedowe		NWI classific	
Are climatic / hydrologic condi				(If no, explain in F	
Are Vegetation, Soil					present? Yes X No
Are Vegetation, Soil		-		d, explain any answe	
Are vegetation, Soil	, or rigarology	naturally problems	anc: (ii needed	i, explain any answe	is in Nemarks.)
SUMMARY OF FINDIN	GS – Attach site m	ap showing sam	pling point locat	tions, transects	s, important features, etc.
Hydrophytic Vegetation Pres	ent? Yes X	No	Is the Sampled Area	a	
Hydric Soil Present?	Yes X	No	within a Wetland?	$^{\prime}$ Yes $ imes$	No
Wetland Hydrology Present?	Yes X	No			
Remarks:					
Data a sint tal					
Data point was taken	next to flag G-327.				
HYDROLOGY					
Wetland Hydrology Indicat	ore.			Secondary Indic	ators (minimum of two required)
Primary Indicators (minimum		r all that apply)		Surface Soil	
			D4.4\	_	getated Concave Surface (B8)
Surface Water (A1) X High Water Table (A2)		True Aquatic Plants (Sparsely ve Drainage Pa	=
		Hydrogen Sulfide Ode	or (C1) es on Living Roots (C3		
Saturation (A3)		Presence of Reduced	= :		
Water Marks (B1)Sediment Deposits (B2)		Recent Iron Reductio		Crayfish Bur	Water Table (C2)
Sediment Deposits (B2) Drift Deposits (B3)		Thin Muck Surface (C		-	riows (C8) /isible on Aerial Imagery (C9)
Algal Mat or Crust (B4)		Other (Explain in Ren			Stressed Plants (D1)
Iron Deposits (B5)		Other (Explain in Ken	ilaiks)	Startled of 3 X Geomorphic	
Inundation Visible on Ae	rial Imagery (R7)			Shallow Aqu	
X Water-Stained Leaves (I	• • •				aphic Relief (D4)
Aquatic Fauna (B13)	J9)			FAC-Neutral	
Field Observations:				I AC-Neulla	Trest (D3)
	Vaa Na V	Danth (inch as)			
Surface Water Present?	Yes No _X_				
Water Table Present?	Yes X No				· · · · · · · · · · · · · · · · · · ·
Saturation Present? (includes capillary fringe)	Yes No _X_	Depth (inches):	Wetland	d Hydrology Presei	nt? Yes X No
Describe Recorded Data (str	eam gauge, monitoring w	ell, aerial photos, pre	vious inspections), if a	vailable:	
Remarks:					
					ļ

/EGETATION (Five Strata) – Use scientific na	mes of	plants.		Sampling Point: DP-24
	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 20'x20')		Species?		Number of Dominant Species
1. Platanus occidentalis	50%	YES	FACW	That Are OBL, FACW, or FAC: 6 (A)
2. Liquidambar styraciflua	10%	NO	<u>FAC</u>	Total Number of Dominant
3				Species Across All Strata: 7 (B)
4				
5				Percent of Dominant Species That Are OBL, FACW, or FAC: 85% (A/B)
6.				That Ale OBE, I AOW, OI I AO.
		= Total Cove	er	Prevalence Index worksheet:
50% -{\data}30%				Total % Cover of: Multiply by:
50% of total cover: 30%	20% of	total cover:	12 /0	OBL species x 1 =
Sapling Stratum (Plot size: 20'x20'	100/	VEC	E 4 0) 4/	FACW species x 2 =
1. Carpinus caroliniana	10%	YES	FACW	FAC species x 3 =
2. Acer rubrum	5%	<u>YES</u>	<u>FAC</u>	FACU species x 4 =
3				UPL species x 5 =
4				Column Totals: (A) (B)
5				Coldifilit Totals (A) (B)
6.				Prevalence Index = B/A =
	15%	= Total Cove	<u></u>	Hydrophytic Vegetation Indicators:
50% of total cover: 7.5%				1 - Rapid Test for Hydrophytic Vegetation
	20% of	total cover:	3 /0	2 - Dominance Test is >50%
Shrub Stratum (Plot size: 20'x20')				_
1				3 - Prevalence Index is ≤3.0¹
2				4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
3		-		Problematic Hydrophytic Vegetation¹ (Explain)
4				Problematic Hydrophytic vegetation (Explain)
5				1
6				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
		= Total Cove	er	
500/ of total occupa				Definitions of Five Vegetation Strata:
50% of total cover:	20% of	total cover:		Tree – Woody plants, excluding woody vines,
Herb Stratum (Plot size: 20'x20')	400/	VEC	- A - O. A /	approximately 20 ft (6 m) or more in height and 3 in.
1. Vaccinium corymbosum	10%	YES	FACW	(7.6 cm) or larger in diameter at breast height (DBH).
2. Woodwardia areolata	10%	YES	FACW	Sapling – Woody plants, excluding woody vines,
3. Athyrium angustum	5%	<u>YES</u>	FAC	approximately 20 ft (6 m) or more in height and less
4		-		than 3 in. (7.6 cm) DBH.
5				Shrub – Woody plants, excluding woody vines,
6				approximately 3 to 20 ft (1 to 6 m) in height.
7				Herb – All herbaceous (non-woody) plants, including
8				herbaceous vines, regardless of size, and woody
9				plants, except woody vines, less than approximately 3
		-	-	ft (1 m) in height.
10		-		Woody vine – All woody vines, regardless of height.
11				
		= Total Cove		
50% of total cover: <u>12.5</u>	$rac{\%}{}$ 20% of	total cover:	5%	
Woody Vine Stratum (Plot size: 20'x20')				
1				
2				
3				
4				
5				Hydrophytic
		= Total Cove	er	Vegetation
50% of total cover:	20% of	total cover:		Present? Yes X No No
Remarks: (Include photo numbers here or on a separate s				1
, and a separate of	 /			

SOIL Sampling Point: DP-24

Profile Desc	ription: (Describe	to the dept	th needed to docun	nent the i	ndicator	or confirm	the absence of indicators.)			
Depth	Matrix		Redo	x Features	s					
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture Remarks			
0-4	10YR 3/3	100			-		Sandy Loam			
4-18	10YR 7/2	90	7.5YR 6/6	10	С	PL	Sandy Loam			
					-					
	-									
		·			·					
					-					
		· 			-					
1- 0.0							21			
Hydric Soil	oncentration, D=Dep	letion, RM=	Reduced Matrix, MS	s=Masked	Sand Gra	ains.	² Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils ³ :			
_			5 10 ((07)						
Histosol			Dark Surface		(CO) (N	U D A 447	2 cm Muck (A10) (MLRA 147)			
	pipedon (A2)		Polyvalue Be							
Black Hi	en Sulfide (A4)		Thin Dark Su Loamy Gleye			47, 140)	(MLRA 147, 148) Piedmont Floodplain Soils (F19)			
	d Layers (A5)		Z Depleted Mat	,	r <i>z)</i>		(MLRA 136, 147)			
	ick (A10) (LRR N)		Redox Dark S	. ,	·6)		Very Shallow Dark Surface (TF12)			
	d Below Dark Surfac	e (A11)	Depleted Dar	,	,		Other (Explain in Remarks)			
	ark Surface (A12)	- (Redox Depre							
	lucky Mineral (S1) (L	.RR N,	Iron-Mangan			LRR N,				
MLRA	\ 147, 148)		MLRA 13	6)						
	Bleyed Matrix (S4)		Umbric Surfa				³ Indicators of hydrophytic vegetation and			
	Redox (S5)		Piedmont Flo							
	Matrix (S6)		Red Parent N	/laterial (F	21) (MLR	A 127, 147	7) unless disturbed or problematic.			
Restrictive I	Layer (if observed):									
Type:										
Depth (in	ches):		<u> </u>				Hydric Soil Present? Yes X No No			
Remarks:							•			

Project/Site: Cumberland	d County Pr	operty	Citv/C	County: Cumberl	and County	Sampling Date: 4/30/2018
Applicant/Owner: CWV, LLC						Sampling Point: <u>DP-24, UPL</u>
Investigator(s): Shannon D	D. Hill		Section Section	on Townshin Range	Tax Map #45-A	camping round <u>Br 21; or c</u> \-1
• • •	tc): Hillslone	<u> </u>	L ocal rel	ief (concave convex	none).	Slope (%): 4-6%
						Datum:
Soil Map Unit Name: Chewa						
Are climatic / hydrologic condi						
•			-			
Are Vegetation, Soil _						present? Yes X No
Are Vegetation, Soil _	, or Hydro	ology	naturally problem	atic? (If need	ed, explain any answe	ers in Remarks.)
SUMMARY OF FINDIN	GS – Attac	h site m	nap showing san	npling point loc	ations, transects	s, important features, etc.
Hydrophytic Vegetation Pres	ent? Y	es	NoX	Is the Sampled Ar	-02	
Hydric Soil Present?			No_X	within a Wetland?		No <u> </u>
Wetland Hydrology Present?	· Y	es	No X			
Remarks:						
Data point was taken						
HYDROLOGY						
Wetland Hydrology Indicat	ors:				Secondary Indicate	ators (minimum of two required)
Primary Indicators (minimum	ı of one is requ	ired; chec	k all that apply)		Surface Soil	
Surface Water (A1)			True Aquatic Plants	(B14)	Sparsely Ve	getated Concave Surface (B8)
High Water Table (A2)			Hydrogen Sulfide Od	lor (C1)	Drainage Pa	atterns (B10)
Saturation (A3)			Oxidized Rhizospher	es on Living Roots (0	C3) Moss Trim L	ines (B16)
Water Marks (B1)			Presence of Reduce	d Iron (C4)	Dry-Season	Water Table (C2)
Sediment Deposits (B2)			Recent Iron Reduction		· · · · · · · · · · · · · · · · · · ·	
Drift Deposits (B3)			Thin Muck Surface (isible on Aerial Imagery (C9)
Algal Mat or Crust (B4)			Other (Explain in Rei	marks)		Stressed Plants (D1)
Iron Deposits (B5)						Position (D2)
Inundation Visible on Ae		37)			Shallow Aqu	
Water-Stained Leaves (B9)					aphic Relief (D4)
Aquatic Fauna (B13)					FAC-Neutra	Test (D5)
Field Observations:		🗸				
Surface Water Present?			Depth (inches):			
Water Table Present?			Depth (inches):			
Saturation Present?	Yes	No X	Depth (inches):	Wetla	nd Hydrology Prese	nt? Yes No <u>X</u>
(includes capillary fringe) Describe Recorded Data (str	ream gauge, m	onitoring v	well, aerial photos, pre	evious inspections), if	available:	
,		J		, ,,		
Remarks:						

/EGETATION (Five Strata) – Use scientific na	ames of p	plants.		Sampling Point: DP-24, UPL
201-201	Absolute	Dominant		Dominance Test worksheet:
Tree Stratum (Plot size: 20'x20')		Species?		Number of Dominant Species
1. Liriodendron tulipfera	20%	YES	FACU	That Are OBL, FACW, or FAC: 2 (A)
2. Fagus grandifolia	25%	YES	FACU	Total Number of Dominant
3				Species Across All Strata: 6 (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 33% (A/B)
6				Presidence in description of
	45%	= Total Cov	er	Prevalence Index worksheet:
50% of total cover:22.5	5% 20% of	total cover:	9%	Total % Cover of: Multiply by: OBL species 0 x 1 = 0
Sapling Stratum (Plot size: 20'x20')				X ! =
1. Ilex opaca	15%	YES	FAC	FACW species 0 $x = 0$
2. Acer rubrum	10%	YES	FAC	FAC species 25 x 3 = 75 FACU species 75 x 4 = 300
3				
4				UPL species 0 x 5 = 0
5				Column Totals: <u>100</u> (A) <u>375</u> (B)
6.				Prevalence Index = B/A = 3.75
<u>. </u>		= Total Cov		Hydrophytic Vegetation Indicators:
12 <i>l</i>				1 - Rapid Test for Hydrophytic Vegetation
50% of total cover: 12.5	20% of	total cover:	370	2 - Dominance Test is >50%
Shrub Stratum (Plot size: 20'x20')				3 - Prevalence Index is ≤3.0 ¹
1				<u> </u>
2				4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
3				Problematic Hydrophytic Vegetation ¹ (Explain)
4				
5				¹ Indicators of hydric soil and wetland hydrology must
6				be present, unless disturbed or problematic.
	:	= Total Cov	er	Definitions of Five Vegetation Strata:
50% of total cover:	20% of	total cover:		Trace Manda plants analysis a manda since
Herb Stratum (Plot size: 20'x20')				Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in.
Polystichum acrostichoides	15%	YES	FACU	(7.6 cm) or larger in diameter at breast height (DBH).
2				Sapling – Woody plants, excluding woody vines,
3				approximately 20 ft (6 m) or more in height and less
4.				than 3 in. (7.6 cm) DBH.
5.				Shrub – Woody plants, excluding woody vines,
6				approximately 3 to 20 ft (1 to 6 m) in height.
7				Herb – All herbaceous (non-woody) plants, including
8				herbaceous vines, regardless of size, and woody
9				plants, except woody vines, less than approximately 3
10				ft (1 m) in height.
11.				Woody vine - All woody vines, regardless of height.
		= Total Cov	or.	
7.50				
50% of total cover: <u>7.5%</u>	20% of	total cover:	3%	
Woody Vine Stratum (Plot size: 20'x20')	4.50/			
1. Smilax rotundifolia	15%	YES	FAC	
2				
3				
4				
5				Hydrophytic
	15%	= Total Cov	er	Vegetation
50% of total cover:7.5	<u>%</u> 20% of	total cover:	3%	Present? Yes No_X
Remarks: (Include photo numbers here or on a separate s			<u> </u>	1

Sampling Point: DP-24, UPL

Depth	Matrix		Redox Features	-2 December
(inches)	Color (moist)	<u>%</u>	Color (moist) % Type ¹ Lo	c ² Texture Remarks
0-6	10YR 5/3	100		Sandy Loam_
6-18	10YR 6/4	100		Sandy Loam
	-			
				<u> </u>
				
				
				
		pletion, RM=R	Reduced Matrix, MS=Masked Sand Grains.	² Location: PL=Pore Lining, M=Matrix.
ydric Soil	Indicators:			Indicators for Problematic Hydric Soils ³ :
_ Histosol			Dark Surface (S7)	2 cm Muck (A10) (MLRA 147)
	oipedon (A2)		Polyvalue Below Surface (S8) (MLRA	
	stic (A3)		Thin Dark Surface (S9) (MLRA 147, 1	
	en Sulfide (A4)		Loamy Gleyed Matrix (F2)	Piedmont Floodplain Soils (F19)
	d Layers (A5) ick (A10) (LRR N)		Depleted Matrix (F3)	(MLRA 136, 147)
	d Below Dark Surfa	ιςο (Δ11)	Redox Dark Surface (F6)Depleted Dark Surface (F7)	<pre> Very Shallow Dark Surface (TF12) Other (Explain in Remarks)</pre>
	ark Surface (A12)	(/(1/)	Redox Depressions (F8)	Onlor (Explain in Remaille)
	fucky Mineral (S1)	(LRR N,	Iron-Manganese Masses (F12) (LRR	N,
	A 147, 148)	,	MLRA 136)	,
	Bleyed Matrix (S4)		Umbric Surface (F13) (MLRA 136, 12	2) ³ Indicators of hydrophytic vegetation and
_ Sandy R	Redox (S5)		Piedmont Floodplain Soils (F19) (MLF	RA 148) wetland hydrology must be present,
	Matrix (S6)		Red Parent Material (F21) (MLRA 127	7, 147) unless disturbed or problematic.
estrictive l	Layer (if observed	l):		
Type:			<u> </u>	
Depth (in	ches):			Hydric Soil Present? Yes No X
emarks:				-

Project/Site: Cumberland	County Property	City/C	county: Cumberlar	nd County	Sampling Date: 4/30/2018
Applicant/Owner: CWV, LLC;			,		Sampling Point: DP-25
Investigator(s): Shannon D		Section	on, Township, Range:		
	tc.): Floodplain	L ocal reli	ef (concave, convex, n	ione):	Slope (%):1-3%
					Datum:
Soil Map Unit Name: Chewa	cla and Monocan soils/	Poindexter Wedowe		NWI classific	
Are climatic / hydrologic condi				(If no, explain in F	
Are Vegetation, Soil					present? Yes X No
Are Vegetation, Soil				, explain any answe	
Are vegetation, Soil	, or Hydrology	naturally problems	anc: (ii needed	, explain any answe	ers in Remarks.)
SUMMARY OF FINDIN	GS – Attach site m	ap showing sam	pling point locat	ions, transects	s, important features, etc.
Hydrophytic Vegetation Pres	ent? Yes X	No	Is the Sampled Area	•	
Hydric Soil Present?	Yes X		within a Wetland?	Yes X	No
Wetland Hydrology Present?	Yes X	No			
Remarks:		<u> </u>			
D () ()					
Data point was taken	next to flag G-437.				
HYDROLOGY					
Wetland Hydrology Indicat	ore.			Secondary Indica	ators (minimum of two required)
Primary Indicators (minimum		r all that apply)		Surface Soil	
			D4.4)	· ' '	getated Concave Surface (B8)
Surface Water (A1) X High Water Table (A2)		True Aquatic Plants (Sparsely ve Drainage Pa	= : : : : : : : : : : : : : : : : : : :
		Hydrogen Sulfide Ode	or (C1) es on Living Roots (C3		
Saturation (A3)		Presence of Reduced			
Water Marks (B1)Sediment Deposits (B2)		Recent Iron Reductio		Crayfish Bur	Water Table (C2)
Sediment Deposits (B2) Drift Deposits (B3)		Thin Muck Surface (C		•	isible on Aerial Imagery (C9)
Algal Mat or Crust (B4)		Other (Explain in Ren			stressed Plants (D1)
Iron Deposits (B5)		Other (Explain in Ken	ilaiks)	Stuffled of S X Geomorphic	
Inundation Visible on Ae	rial Imagery (R7)			Shallow Aqu	
X Water-Stained Leaves (I	• • • •				aphic Relief (D4)
Aquatic Fauna (B13)	J9)			FAC-Neutra	
Field Observations:			1	I AC-Neulla	Test (D3)
	Van Na V	Danth (inch as)			
Surface Water Present?	Yes No _X_				
Water Table Present?	Yes X No				· · · · · · · · · · · · · · · · · · ·
Saturation Present? (includes capillary fringe)	Yes No _X_	Depth (inches):	Wetland	l Hydrology Prese	nt? Yes <u>X</u> No
Describe Recorded Data (str	eam gauge, monitoring w	ell, aerial photos, pre	vious inspections), if a	vailable:	
Remarks:					

/EGETATION (Five Strata) – Use scientific na	mes of p	plants.		Sampling Point: DP-25
· · · · · · · · · · · · · · · · · · ·	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 20'x20')		Species?		Number of Dominant Species
1. Betula nigra	20%	YES	FACW	That Are OBL, FACW, or FAC: 6 (A)
2. Acer rubrum	5%	YES	FAC	
3				Total Number of Dominant Species Across All Strata: 6 (B)
•				Species Across All Strata.
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 100% (A/B)
6				Prevalence Index worksheet:
	25%	= Total Cov	er	
50% of total cover:12.5	% 20% of	total cover:	5%	
Sapling Stratum (Plot size: 20'x20'				OBL species x 1 =
	20%	YES	FACW	FACW species x 2 =
				FAC species x 3 =
2				FACU species x 4 =
3				UPL species x 5 =
4				Column Totals: (A) (B)
5				
6				Prevalence Index = B/A =
	20%	= Total Cov	er	Hydrophytic Vegetation Indicators:
50% of total cover: 10%				1 - Rapid Test for Hydrophytic Vegetation
Shrub Stratum (Plot size: 20'x20')	20 /0 01	total cover.		2 - Dominance Test is >50%
	000/		EA 0\4/	3 - Prevalence Index is ≤3.0 ¹
1. Alnus serrulata				
2				4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
3				Problematic Hydrophytic Vegetation¹ (Explain)
4				1 Toblematic Hydrophytic Vegetation (Explain)
5				1
6.				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
	20%	= Total Cov	er	
500/ of total account				Definitions of Five Vegetation Strata:
50% of total cover:	20% of	total cover:		Tree – Woody plants, excluding woody vines,
Herb Stratum (Plot size: 20'x20')	000/	\/=0		approximately 20 ft (6 m) or more in height and 3 in.
1. Athyrium angustum	20%	YES	FACW	(7.6 cm) or larger in diameter at breast height (DBH).
2				Sapling – Woody plants, excluding woody vines,
3				approximately 20 ft (6 m) or more in height and less
4				than 3 in. (7.6 cm) DBH.
5				Shrub – Woody plants, excluding woody vines,
6			-	approximately 3 to 20 ft (1 to 6 m) in height.
				Harb All harbassaus (non woods) plants including
7				Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody
8				plants, except woody vines, less than approximately 3
9				ft (1 m) in height.
10				Woody vine – All woody vines, regardless of height.
11				Woody vine - All woody vines, regardless of neight.
	20%	= Total Cov	er	
50% of total cover: 10%	20% of	total cover.	5%	
Woody Vine Stratum (Plot size: 20'x20')	2070 01	total cover.		
	4.50/	\/F0	E 4 0\4/	
1. Vitis riparia				
2				
3				
4				
5.				
	15%	= Total Cov	er	Hydrophytic Vegetation
				Present? Yes X No
50% of total cover:		total cover:	<u> </u>	
Remarks: (Include photo numbers here or on a separate shape of the	neet.)			

SOIL Sampling Point: DP-25

Depth	Matrix			K Features			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture Remarks
0-4	10YR 4/2	100					Sandy Loam
4-18	10YR 6/2	85	5YR 5/6	15	С	PL	Sandy Loam
	-						
1Typo: C-C	oncontration D-Do	nlotion PM	=Reduced Matrix, MS	-Mackad 9	Sand Gra	inc	² Location: PL=Pore Lining, M=Matrix.
Hydric Soil		pielion, Kivi	=Reduced Matrix, Mc	=iviaskeu s	Sariu Gra	1115.	Indicators for Problematic Hydric Soils ³ :
Histosol			Dark Surface	(S7)			2 cm Muck (A10) (MLRA 147)
	oipedon (A2)		Polyvalue Be		e (S8) (M	LRA 147,	
	stic (A3)		Thin Dark Su				(MLRA 147, 148)
Hydroge	en Sulfide (A4)		Loamy Gleye			•	Piedmont Floodplain Soils (F19)
Stratified	d Layers (A5)		X Depleted Mat	rix (F3)			(MLRA 136, 147)
	uck (A10) (LRR N)		Redox Dark S	,	•		Very Shallow Dark Surface (TF12)
	d Below Dark Surfa	ce (A11)	Depleted Dar				Other (Explain in Remarks)
	ark Surface (A12)	(LDD N	Redox Depre			DD N	
	Mucky Mineral (S1)	LKK N,	Iron-Mangane		6 (F12) (L	.KK N,	
	A 147, 148) Gleyed Matrix (S4)		MLRA 136 Umbric Surfa	•	II D A 13	3 122)	³ Indicators of hydrophytic vegetation and
	Redox (S5)		Piedmont Flo				
	Matrix (S6)		Red Parent M				
	Layer (if observed):			, ,		,
Type:							
Depth (in	ches):						Hydric Soil Present? Yes X No
Remarks:	, -						

Project/Site: Cumberland	County Pro	perty	Citv/C	county: Cumber	land County	_ Sampling Date: 4/30/2018
Applicant/Owner: CWV, LLC						Sampling Point: <u>DP-25, UPL</u>
Investigator(s): Shannon D			Section Section	on, Township, Rang	e. Tax Map #45-	——
• , ,	c.) Hillslope/7	ne of S	Slope Local rel	ief (concave, conve	c none).	Slope (%): 3-5%
Soil Map Unit Name: Chewa						
Are climatic / hydrologic condit						
Are Vegetation, Soil			-			present? Yes X No
-	-		-			
Are Vegetation, Soil	, or Hydroid	ogy	naturally problema	atic? (if need	led, explain any answ	ers in Remarks.)
SUMMARY OF FINDIN	GS – Attach	site m	nap showing san	npling point loc	ations, transect	s, important features, etc.
Hydrophytic Vegetation Pres	ent? Yes	5	NoX	Is the Sampled A	rea	
Hydric Soil Present?			No_X	within a Wetland		No <u> </u>
Wetland Hydrology Present?	Yes	s	No X			
Remarks:						
			_			
Data point was taken	adjacent to fla	g G-43	37.			
HYDROLOGY						
					On an allow to dea	-ton- (-2-2
Wetland Hydrology Indicat						cators (minimum of two required)
Primary Indicators (minimum	of one is require			(5.4.1)	Surface Soi	
Surface Water (A1)			True Aquatic Plants (egetated Concave Surface (B8)
High Water Table (A2)			Hydrogen Sulfide Od		-	atterns (B10)
Saturation (A3)			Oxidized Rhizospher			
Water Marks (B1)			Presence of Reduced			Water Table (C2)
Sediment Deposits (B2)			Recent Iron Reduction		-	
Drift Deposits (B3)			Thin Muck Surface (C			Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4)			Other (Explain in Rer	marks)		Stressed Plants (D1)
Iron Deposits (B5)						c Position (D2)
Inundation Visible on Ae)			Shallow Aq	
Water-Stained Leaves (I	39)					raphic Relief (D4)
Aquatic Fauna (B13)				,	FAC-Neutra	il Test (D5)
Field Observations:		~				
Surface Water Present?			Depth (inches):			
Water Table Present?			Depth (inches):			
Saturation Present?	Yes N	0 <u>X</u>	Depth (inches):	Wetla	ind Hydrology Prese	ent? Yes No X
(includes capillary fringe) Describe Recorded Data (str	eam gauge, mor	nitorina v	well, aerial photos, pre	evious inspections). i	f available:	
· ·	3 3 ,	J	, , , , , , ,	, ,,		
Remarks:						
rtomanto.						

/EGETATION (Five Strata) – Use scientific na	mes of	plants.		Sampling Point: DP-25, UPL
201/201	Absolute	Dominant		Dominance Test worksheet:
,		Species?		Number of Dominant Species
1. Liriodendron tulipfera	20%	YES	FACU	That Are OBL, FACW, or FAC: 0 (A)
2. Fagus grandifolia	25%	YES	FACU	Total Number of Dominant
3. Quercus alba	20%	YES	<u>FACU</u>	Species Across All Strata: 5 (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: (A/B)
6				- , ,
	65%	= Total Cove	er	Prevalence Index worksheet:
50% of total cover: 32.5	% _{20% of}	total cover:	13%	Total % Cover of: Multiply by:
Sapling Stratum (Plot size: 20'x20')	_	_		OBL species 0 x 1 = 0
	15%	YES	FACU	FACW species 0 $x = 0$
2				FAC species 0 x 3 = 0
3				FACU species 100 x 4 = 400
4				UPL species 0 x 5 = 0
5				Column Totals: <u>100</u> (A) <u>400</u> (B)
6				Prevalence Index = B/A = 4.00
0		= Total Cove	or or	Hydrophytic Vegetation Indicators:
7 5%				1 - Rapid Test for Hydrophytic Vegetation
50% of total cover: 7.5%	<u>20% ot</u>	total cover:	370	2 - Dominance Test is >50%
Shrub Stratum (Plot size: 20'x20')				_
1				3 - Prevalence Index is ≤3.0¹
2				4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
3				Problematic Hydrophytic Vegetation ¹ (Explain)
4				
5				¹ Indicators of hydric soil and wetland hydrology must
6				be present, unless disturbed or problematic.
		= Total Cove	ər	Definitions of Five Vegetation Strata:
50% of total cover:	20% of	total cover:		Tree Weeds plants evaluding weeds wines
Herb Stratum (Plot size: 20'x20')				Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in.
Polystichum acrostichoides	20%	YES	FACU	(7.6 cm) or larger in diameter at breast height (DBH).
2		<u> </u>		Sapling – Woody plants, excluding woody vines,
3				approximately 20 ft (6 m) or more in height and less
4.				than 3 in. (7.6 cm) DBH.
5				Shrub – Woody plants, excluding woody vines,
6				approximately 3 to 20 ft (1 to 6 m) in height.
7				Herb – All herbaceous (non-woody) plants, including
8				herbaceous vines, regardless of size, and woody
9				plants, except woody vines, less than approximately 3
10				ft (1 m) in height.
11.				Woody vine – All woody vines, regardless of height.
		= Total Cove		
400/				
50% of total cover: 10%	20% of	total cover:	4%_	
Woody Vine Stratum (Plot size: 20'x20')				
1				
2				
3				
4				
5				Hydrophytic
	:	= Total Cove	er	Vegetation
50% of total cover:	20% of	total cover:		Present? Yes No X
Remarks: (Include photo numbers here or on a separate sh				
(,			

Sampling Point: DP-25, UPL

Depth (in all as)	Matrix	0/	Redox Features	Tandona
inches)	Color (moist)	<u>%</u>	Color (moist) % Type ¹ Loc ²	Texture Remarks
0-4	10YR 5/2	100		Sandy Loam
4-12	10YR 6/3	100		Sandy Loam
12-18	10YR 6/4	100		Sandy C. Loam
				
		mletien DM D	advect Matrix MC Madred Cond Coning	21 and in the Daniel Lining M. Matrice
ype: C=Co ydric Soil I		epietion, Rivi=R	educed Matrix, MS=Masked Sand Grains.	² Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils ³ :
_ Histosol			Dark Surface (S7)	2 cm Muck (A10) (MLRA 147)
	ipedon (A2)		Polyvalue Below Surface (S8) (MLRA 147,	
Black His			Thin Dark Surface (S9) (MLRA 147, 148)	(MLRA 147, 148)
_ Hydroger	n Sulfide (A4)		Loamy Gleyed Matrix (F2)	Piedmont Floodplain Soils (F19)
	Layers (A5)		Depleted Matrix (F3)	(MLRA 136, 147)
	ck (A10) (LRR N)		Redox Dark Surface (F6)	Very Shallow Dark Surface (TF12)
	Below Dark Surfa	ice (A11)	Depleted Dark Surface (F7)	Other (Explain in Remarks)
	rk Surface (A12) ucky Mineral (S1)	/I DD N	Redox Depressions (F8)Iron-Manganese Masses (F12) (LRR N,	
	147, 148)	(LKK N,	MLRA 136)	
	leyed Matrix (S4)		Umbric Surface (F13) (MLRA 136, 122)	³ Indicators of hydrophytic vegetation and
	edox (S5)		Piedmont Floodplain Soils (F19) (MLRA 148	
_ Stripped	Matrix (S6)		Red Parent Material (F21) (MLRA 127, 147)	unless disturbed or problematic.
estrictive L	ayer (if observed	l):		
Туре:			_	
Type: Depth (inc	:hes):		-	Hydric Soil Present? Yes No _X
Depth (inc	ches):			Hydric Soil Present? Yes No _X
Depth (inc	rhes):		- 	Hydric Soil Present? Yes No X
Depth (inc	hes):			Hydric Soil Present? Yes No _X
Depth (inc	hes):			Hydric Soil Present? Yes No X
Depth (inc	hes):			Hydric Soil Present? Yes No X
Depth (inc	hes):			Hydric Soil Present? Yes No _X
Depth (inc	hes):			Hydric Soil Present? Yes No _X
Depth (inc	hes):			Hydric Soil Present? Yes No _X
Depth (inc	rhes):			Hydric Soil Present? Yes No X
Depth (inc	rhes):			Hydric Soil Present? Yes No _X
Depth (inc	thes):			Hydric Soil Present? Yes No _X
Depth (inc	hes):			Hydric Soil Present? Yes No _X
Depth (inc	hes):			Hydric Soil Present? Yes No _X
Depth (inc	rhes):			Hydric Soil Present? Yes No X
Depth (inc	ches):			Hydric Soil Present? Yes No _X
Depth (inc	rhes):			Hydric Soil Present? Yes No _X
	hes):			Hydric Soil Present? Yes No _X
Depth (inc	hes):			Hydric Soil Present? Yes No _X
Depth (inc	rhes):			Hydric Soil Present? Yes No _X
Depth (inc	rhes):			Hydric Soil Present? Yes No _X
Depth (inc	ches):			Hydric Soil Present? Yes No _X
Depth (inc	ehes):			Hydric Soil Present? Yes No _X

Project/Site: Cumberland	County F	roperty	City/C	county: Cumber	land County	Sampling Date: 4/30/2018
Applicant/Owner: CWV, LLC;				•		Sampling Point: DP-26
Investigator(s): Hannah L. N	Miller		Section Section	on, Township, Rang	e: Tax Map # 38-	
	c)· Floodp	lain	L ocal rel	ief (concave, conve	x none).	Slope (%):0-2%
Subregion (LRR or MLRA):n,					-78.115965775	
Soil Map Unit Name: Chewar	la and Mor	nocan soils	·	Long.		ication: PFO
Are climatic / hydrologic condit				vaa X Na		
· · · · · · · · · · · · · · · · · · ·						
Are Vegetation, Soil						present? Yes X No
Are Vegetation, Soil	, or Hyd	drology	naturally problema	atic? (If need	ded, explain any answ	ers in Remarks.)
SUMMARY OF FINDING	GS – Atta	ch site n	nap showing san	npling point lo	cations, transect	s, important features, etc.
Hydrophytic Vegetation Prese	ent?	Yes X	No	Is the Sampled A	roa	
Hydric Soil Present?		Yes X	No	within a Wetland		No
Wetland Hydrology Present?		Yes X	No			_
Remarks:						
Data point was taken r	next to flag	J O-55.				
HYDROLOGY						
Wetland Hydrology Indicate	ors:				Secondary India	cators (minimum of two required)
Primary Indicators (minimum		guired: chec	k all that apply)			il Cracks (B6)
X Surface Water (A1)			True Aquatic Plants (B14)		egetated Concave Surface (B8)
X High Water Table (A2)		_	Hydrogen Sulfide Od		X Drainage P	
X Saturation (A3)		_	Oxidized Rhizospher			
Water Marks (B1)			Presence of Reduced			n Water Table (C2)
Sediment Deposits (B2)			Recent Iron Reduction		· ·	
Drift Deposits (B3)			Thin Muck Surface (Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4)		_	Other (Explain in Rer			Stressed Plants (D1)
Iron Deposits (B5)		_	Other (Explain III No.	nano)	X Geomorphi	
Inundation Visible on Aer	rial Imagery	(B7)			Shallow Aq	
X Water-Stained Leaves (E		(57)				raphic Relief (D4)
Aquatic Fauna (B13)	13)				FAC-Neutra	
Field Observations:					170 140 110	
	Vac V	No	Donth (inches), O"			
Surface Water Present?			_ Depth (inches):0"			
Water Table Present?			Depth (inches): 4"			· · · · · · · · · · · · · · · · · · ·
Saturation Present? (includes capillary fringe)	Yes X	_ No	Depth (inches): 2"	Wetla	and Hydrology Prese	ent? Yes X No
Describe Recorded Data (stre	eam gauge,	monitoring	well, aerial photos, pre	vious inspections),	if available:	
,		· ·		, ,,		
Remarks:						
itemarks.						

/EGETATION (Five Strata) – Use scientific na	mes of p	olants.		Sampling Point: DP-26
20'v20'	Absolute	Dominant		Dominance Test worksheet:
Tree Stratum (Plot size: 20'x20')		Species?		Number of Dominant Species That Are OBL FACW or FAC: 7 (A)
1. Carpinus caroliniana	10%	YES_	FACW	That Are OBL, FACW, or FAC:/ (A)
2				Total Number of Dominant
3				Species Across All Strata: 7 (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 100% (A/B)
6	10%			Prevalence Index worksheet:
		= Total Cove		Total % Cover of: Multiply by:
50% of total cover: 5%	20% of	total cover:	2%	OBL species x 1 =
Sapling Stratum (Plot size: 20'x20')				FACW species x 2 =
1. Acer rubrum	15%	YES	FAC	FAC species x 3 =
2				FACU species x 4 =
3				UPL species x 5 =
4				Column Totals: (A) (B)
5				Column rotals (r) (b)
6				Prevalence Index = B/A =
	15%	= Total Cove	er	Hydrophytic Vegetation Indicators:
50% of total cover: <u>7.5</u> %	20% of	total cover:	3%	1 - Rapid Test for Hydrophytic Vegetation
Shrub Stratum (Plot size: 20'x20')	2070 01	total oover.		2 - Dominance Test is >50%
1				3 - Prevalence Index is ≤3.0 ¹
				4 - Morphological Adaptations ¹ (Provide supporting
2				data in Remarks or on a separate sheet)
3 4.				Problematic Hydrophytic Vegetation ¹ (Explain)
· ·				
5				¹ Indicators of hydric soil and wetland hydrology must
6		T 0		be present, unless disturbed or problematic.
		= Total Cove	er	Definitions of Five Vegetation Strata:
50% of total cover:	20% of	total cover:		Tree – Woody plants, excluding woody vines,
Herb Stratum (Plot size: 20'x20')	/			approximately 20 ft (6 m) or more in height and 3 in.
1. Peltandra virginica	30%	YES	OBL	(7.6 cm) or larger in diameter at breast height (DBH).
2. Onoclea sensibilis	10%	YES	FACW	Sapling – Woody plants, excluding woody vines,
3. Sagitarria latifolia	10%	<u>YES</u>	OBL	approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.
4. Juncus effusus	15%	YES	FACW	than 3 iii. (7.0 ciii) DBH.
5				Shrub – Woody plants, excluding woody vines,
6				approximately 3 to 20 ft (1 to 6 m) in height.
7				Herb - All herbaceous (non-woody) plants, including
8				herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3
9				ft (1 m) in height.
10				Manager All consider a second consideration of high
11				Woody vine – All woody vines, regardless of height.
	65%	= Total Cove	er	
50% of total cover: <u>32.5</u> °				
Woody Vine Stratum (Plot size: 20'x20')	20 /0 01			
1. Smilax rotundifolia	10%	VES	FΔC	
2				
3				
4				
5				Hydrophytic
		= Total Cove		Vegetation Present? Yes X No
50% of total cover:5%	20% of	total cover:	2%_	169 // NO
Remarks: (Include photo numbers here or on a separate sl	neet.)			

SOIL Sampling Point: DP-26

Profile Desc	ription: (Describe	to the dep	th needed to docun	nent the i	ndicator	or confirm	n the absence of indicators.)
Depth	Matrix		Redo	x Feature:	S		
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture Remarks
0-4	10YR 3/3	100					Sandy Loam
4-18	10YR 6/1	80	5YR 5/8	20	С	PL	Sandy Loam
	-						
				·			
	-						
1 _T 0. 0.	tustian D Dan	lation DM	Deduced Metric MC	- Maalaa			21 postions DI Done Lining M. Matrix
Hydric Soil	oncentration, D=Dep	letion, Rivi=	Reduced Matrix, MS	s=iviasked	Sand Gra	ains.	² Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils ³ :
_			Davis Confess	(07)			-
Histosol			Dark Surface		oo (CO) (N	II D A 447	2 cm Muck (A10) (MLRA 147)
Histic Ep	oipedon (A2)		Polyvalue Be Thin Dark Su				148) Coast Prairie Redox (A16) (MLRA 147, 148)
	en Sulfide (A4)		Loamy Gleye			47, 140)	Piedmont Floodplain Soils (F19)
	d Layers (A5)		Z Depleted Mat	,	r <i>z)</i>		(MLRA 136, 147)
	ick (A10) (LRR N)		Redox Dark S	. ,	:6)		Very Shallow Dark Surface (TF12)
	d Below Dark Surface	e (A11)	Depleted Dar	,	,		Other (Explain in Remarks)
	ark Surface (A12)	,	Redox Depre				
	lucky Mineral (S1) (L	.RR N,	Iron-Mangan			_RR N,	
	A 147, 148)		MLRA 13				
Sandy G	Gleyed Matrix (S4)		Umbric Surfa				³ Indicators of hydrophytic vegetation and
	Redox (S5)		Piedmont Flo				
	Matrix (S6)		Red Parent N	/laterial (F	21) (MLR .	A 127, 147	7) unless disturbed or problematic.
Restrictive I	Layer (if observed):						
Type:							
Depth (inc	ches):						Hydric Soil Present? Yes X No No
Remarks:							•

Project/Site: Cumberland Coul	nty Property	City/County:	Cumberland	d County	Sampling Date: 4/30/2018
Applicant/Owner: CWV, LLC; c/o Ja	ames H. Martin				Sampling Point: <u>DP-26, UPL</u>
Investigator(s): Hannah L. Miller		Section, Tow	nship, Range:	Tax Map #38-A-7	7
Landform (hillslope, terrace, etc.): H	illslope/Toe of Slope	Local relief (con	cave, convex, nor	ne):	Slope (%): 3-5%
Subregion (LRR or MLRA): n/a					Datum:
Soil Map Unit Name: Chewacla an			<u> </u>	NWI classifica	
Are climatic / hydrologic conditions or		time of year? Yes X	. No	(If no, explain in Re	
Are Vegetation, Soil,					esent? Yes X No
Are Vegetation, Soil,				explain any answers	
, regetation, cen,	<u>. </u>	atarany problemation	(onpiani any anomono	, iii riomainoly
SUMMARY OF FINDINGS –	Attach site map s	howing sampling	point location	ons, transects,	important features, etc.
Hydrophytic Vegetation Present?	Yes No) X	Sampled Area		
Hydric Soil Present?	Yes No	10 1110	n a Wetland?	Yes	No <u>X</u>
Wetland Hydrology Present?	Yes No				
Remarks:					
Data point was taken adjace	ent to flag O-55.				
HYDROLOGY					
Wetland Hydrology Indicators:				Secondary Indicate	ors (minimum of two required)
Primary Indicators (minimum of one	is required: check all th	nat annly)		Surface Soil C	
Surface Water (A1)	•	Aquatic Plants (B14)			etated Concave Surface (B8)
High Water Table (A2)		ogen Sulfide Odor (C1)		Drainage Patte	
Saturation (A3)		ized Rhizospheres on L		Moss Trim Line	
Water Marks (B1)		ence of Reduced Iron (ater Table (C2)
Sediment Deposits (B2)		ent Iron Reduction in Till		Crayfish Burro	
Drift Deposits (B3)		Muck Surface (C7)	(,		ble on Aerial Imagery (C9)
Algal Mat or Crust (B4)		r (Explain in Remarks)			essed Plants (D1)
Iron Deposits (B5)		, ,		Geomorphic P	
Inundation Visible on Aerial Ima	agery (B7)			Shallow Aquita	
Water-Stained Leaves (B9)				Microtopograp	hic Relief (D4)
Aquatic Fauna (B13)				FAC-Neutral T	est (D5)
Field Observations:					
Surface Water Present? Yes	No X Dep	th (inches):			
Water Table Present? Yes	No X Dep	th (inches):			
Saturation Present? Yes	No X Dep	th (inches):	Wetland F	Hydrology Present	? Yes No <u>X</u>
(includes capillary fringe) Describe Recorded Data (stream ga	ugo monitoring well o	orial photos, provious is	annotiona) if ava	vilable:	
Describe Recorded Data (stream ga	auge, monitoring well, a	eriai priotos, previous ir	ispections), ii ava	mable.	
Domorko					
Remarks:					

/EGETATION (Five Strata) – Use scientific na	mes of	plants.		Sampling Point: DP-26, UPL
201-201	Absolute	Dominant		Dominance Test worksheet:
	% Cover	Species?		Number of Dominant Species
1. Liriodendron tulipfera	25%	YES	FACU	That Are OBL, FACW, or FAC: 1 (A)
2. Fagus grandifolia	20%	YES	FACU	Total Number of Dominant
3				Species Across All Strata: (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 20% (A/B)
6				
	45%	= Total Cove	er	Prevalence Index worksheet:
50% of total cover: 42.5°	% 20% of	total cover:	9%	Total % Cover of: Multiply by:
Sapling Stratum (Plot size: 20'x20'		•		OBL species 0 x 1 = 0
	15%	YES	FAC	FACW species 0 $x = 0$
2				FAC species 15 x 3 = 45
3				FACU species 65 x 4 = 260
4				UPL species 20 x 5 = 100
5				Column Totals: (A) (B)
6.				Prevalence Index = B/A = 4.00
·	15%	= Total Cove		Hydrophytic Vegetation Indicators:
7.50				1 - Rapid Test for Hydrophytic Vegetation
50% of total cover: 7.5%	20% of	total cover:	3%	2 - Dominance Test is >50%
Shrub Stratum (Plot size: 20'x20')				3 - Prevalence Index is ≤3.0 ¹
1				1 - .
2				4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
3				Problematic Hydrophytic Vegetation ¹ (Explain)
4				
5				¹ Indicators of hydric soil and wetland hydrology must
6				be present, unless disturbed or problematic.
		= Total Cove	er	Definitions of Five Vegetation Strata:
50% of total cover:	20% of	total cover:		Tree – Woody plants, excluding woody vines,
Herb Stratum (Plot size: 20'x20')				approximately 20 ft (6 m) or more in height and 3 in.
1. Polystichum acrostichoides	20%	YES	FACU	(7.6 cm) or larger in diameter at breast height (DBH).
2. Podophyllum peltatum	20%	YES	UPL	Sapling – Woody plants, excluding woody vines,
3				approximately 20 ft (6 m) or more in height and less
4				than 3 in. (7.6 cm) DBH.
5				Shrub – Woody plants, excluding woody vines,
6				approximately 3 to 20 ft (1 to 6 m) in height.
7				Herb – All herbaceous (non-woody) plants, including
8				herbaceous vines, regardless of size, and woody
9				plants, except woody vines, less than approximately 3 ft (1 m) in height.
10				
11.				Woody vine – All woody vines, regardless of height.
		= Total Cove	<u></u>	
50% of total cover: 20%				
	20% 01	total cover.	0 70	
Woody Vine Stratum (Plot size: 20'x20')				
1				
2				
3				
4				
5				Hydrophytic
		= Total Cove		Vegetation Present? Yes No
50% of total cover:	20% of	total cover:		riesent: iesNO_/\
Remarks: (Include photo numbers here or on a separate sh	neet.)			

Sampling Point: DP-26, UPL

Depth	Matrix		Redox Features	
(inches)	Color (moist)	<u>%</u>	Color (moist) % Type ¹ Loc ²	
0-4	10YR 5/2	100		Sandy Loam_
4-12	10YR 6/4	100		Sandy Loam
12-18	10YR 7/6	100		Sandy C. Loam
	_			
	ncentration D-De	nletion PM-P	educed Matrix, MS=Masked Sand Grains.	² Location: PL=Pore Lining, M=Matrix.
ydric Soil I		spietion, Kivi=K	educed Matrix, MS=Masked Sarid Grains.	Indicators for Problematic Hydric Soils ³ :
_ Histosol			Dark Surface (S7)	2 cm Muck (A10) (MLRA 147)
	ipedon (A2)		Polyvalue Below Surface (S8) (MLRA 1	
Black His			Thin Dark Surface (S9) (MLRA 147, 148	
	n Sulfide (A4)		Loamy Gleyed Matrix (F2)	Piedmont Floodplain Soils (F19)
	Layers (A5)		Depleted Matrix (F3)	(MLRA 136, 147)
	ck (A10) (LRR N)	(111)	Redox Dark Surface (F6)	<pre> Very Shallow Dark Surface (TF12) Other (Explain in Remarks)</pre>
	l Below Dark Surfa irk Surface (A12)	ice (ATT)	Depleted Dark Surface (F7)Redox Depressions (F8)	Other (Explain in Remarks)
	lucky Mineral (S1)	(LRR N.	Iron-Manganese Masses (F12) (LRR N,	
	147, 148)	(,	MLRA 136)	
	leyed Matrix (S4)		Umbric Surface (F13) (MLRA 136, 122)	³ Indicators of hydrophytic vegetation and
	edox (S5)		Piedmont Floodplain Soils (F19) (MLRA	
	Matrix (S6)		Red Parent Material (F21) (MLRA 127,	unless disturbed or problematic.
	ayer (if observed	l):		
Type:			_	
	ches):		<u> </u>	Hydric Soil Present? Yes No X
Depth (inc				
Depth (inc				

Project/Site: Cumberland	County Property	Citv/C	ounty: Cumberla	ind County	Sampling Date: 4/31/2018
Applicant/Owner: CWV, LLC;			,		Sampling Point: DP-27
Investigator(s): Hannah L.	Miller	Section	on, Township, Range:		A-7
	c.): Floodplain	Local reli	ef (concave, convex.	none):	Slope (%):1-3%
					Datum:
Soil Map Unit Name: Chewar				NWI classifi	
Are climatic / hydrologic condit		r this time of year? V	and the second s	(If no, explain in F	
Are Vegetation, Soil					present? Yes X No
Are Vegetation, Soil				d, explain any answe	
Are vegetation, 30ii	, or rivarology	naturally problema	alic: (Il lieede	u, explain any answe	ers in Remarks.)
SUMMARY OF FINDIN	GS - Attach site ma	ap showing sam	pling point loca	tions, transects	s, important features, etc.
Hydrophytic Vegetation Pres	ent? Yes X		Is the Sampled Are	na .	
Hydric Soil Present?	Yes X	No	within a Wetland?	$_{Yes}$ \times	No
Wetland Hydrology Present?	Yes X	No			
Remarks:					
5					
Data point was taken i	next to flag O-294.				
HYDROLOGY					
Wetland Hydrology Indicate	ors:			Secondary Indic	ators (minimum of two required)
Primary Indicators (minimum		all that annly)		Surface Soil	
Surface Water (A1)		True Aquatic Plants (l	R14)		getated Concave Surface (B8)
High Water Table (A2)		Hydrogen Sulfide Od		Sparsery ve	
Saturation (A3)			es on Living Roots (C		
Water Marks (B1)		Presence of Reduced	-		Water Table (C2)
Sediment Deposits (B2)		Recent Iron Reduction		Crayfish Bu	
Drift Deposits (B3)		Thin Muck Surface (C		-	isible on Aerial Imagery (C9)
Algal Mat or Crust (B4)		Other (Explain in Ren			Stressed Plants (D1)
Iron Deposits (B5)		ошо: (<u>-</u> лр.с то		X Geomorphic	
Inundation Visible on Ae	rial Imagery (B7)			Shallow Aqu	
X Water-Stained Leaves (E					aphic Relief (D4)
Aquatic Fauna (B13)				FAC-Neutra	
Field Observations:					
Surface Water Present?	Yes No _X	Depth (inches):			
Water Table Present?	Yes X No				
Saturation Present?	Yes No			d Hydrology Prese	nt? Yes <u>X</u> No
(includes capillary fringe)	res No	Depth (inches):	wetian	a nyarology Prese	nt? res No
Describe Recorded Data (stre	eam gauge, monitoring w	ell, aerial photos, pre	vious inspections), if	available:	
Remarks:	-				

/EGETATION (Five Strata) – Use scientific na	mes of	plants.		Sampling Point: DP-27
	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 20'x20')		Species?	Status	Number of Dominant Species
1. Carpinus caroliniana	15%	YES	FACW	That Are OBL, FACW, or FAC: 6 (A)
2. Liquidambar styraciflua	15%	NO	FAC	Total Number of Dominant
3				Species Across All Strata: 7 (B)
4				Barrant of Barrier of Canada
5				Percent of Dominant Species That Are OBL, FACW, or FAC: 85% (A/B)
6.				
	30%	= Total Cov	er	Prevalence Index worksheet:
50% of total cover: 15%				Total % Cover of: Multiply by:
	20% 01	total cover.	070	OBL species x 1 =
Sapling Stratum (Plot size: 20'x20')	15%	YES	E A C\A/	FACW species x 2 =
1. Carpinus caroliniana			FACW	FAC species x 3 =
2. Acer rubrum	<u>15%</u>	<u>YES</u>	<u>FAC</u>	FACU species x 4 =
3				UPL species x 5 =
4				Column Totals: (A) (B)
5				(5)
6				Prevalence Index = B/A =
	30%	= Total Cov	er	Hydrophytic Vegetation Indicators:
50% of total cover: 15%				1 - Rapid Test for Hydrophytic Vegetation
Shrub Stratum (Plot size: 20'x20')	20 /6 01	iolai covei.		2 - Dominance Test is >50%
				3 - Prevalence Index is ≤3.0 ¹
1				4 - Morphological Adaptations ¹ (Provide supporting
2				data in Remarks or on a separate sheet)
3				Problematic Hydrophytic Vegetation ¹ (Explain)
4				
5				¹ Indicators of hydric soil and wetland hydrology must
6				be present, unless disturbed or problematic.
		= Total Cov	er	Definitions of Five Vegetation Strata:
50% of total cover:	20% of	total cover:		
Herb Stratum (Plot size: 20'x20')	2070 01	total oover.		Tree – Woody plants, excluding woody vines,
	200/	VEC	FAC	approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).
,				(1.0 cm) or ranger in anameter at 2.0 cc merg. in (2.2.17).
2. Podophyllum peltatum	10%	YES	FACU	Sapling – Woody plants, excluding woody vines,
3				approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.
4				
5	-			Shrub – Woody plants, excluding woody vines,
6				approximately 3 to 20 ft (1 to 6 m) in height.
7				Herb - All herbaceous (non-woody) plants, including
8				herbaceous vines, regardless of size, and woody
9				plants, except woody vines, less than approximately 3 ft (1 m) in height.
10				
11.				Woody vine – All woody vines, regardless of height.
		= Total Cov	er	
50% of total cover: 15%				
	20% 01	total cover:	070	
Woody Vine Stratum (Plot size: 20'x20')	• ·			
1. Smilax rotundifolia	10%	YES	FAC	
2				
3		· 		
4				
5				Hydronhytic
	10%	= Total Cov	er	Hydrophytic Vegetation
50% of total cover: 5%				Present? Yes X No
		iolai cuvel.		
Remarks: (Include photo numbers here or on a separate sl	ieet.)			

SOIL Sampling Point: DP-27

Profile Desc	ription: (Describe	to the dept	th needed to docun	nent the i	ndicator	or confirm	the absence of indicators.)
Depth	Matrix		Redo	x Feature:	S		
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture Remarks
0-4	10YR 4/2	100					Sandy Loam
4-18	10YR 7/2	90	10YR 6/6	10	С	PL	Sandy Loam
	-						
		·		·			
				-			
		· 					
1- 0.0							21
Hydric Soil	oncentration, D=Dep	letion, RM=	Reduced Matrix, MS	s=Masked	Sand Gra	ains.	² Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils ³ :
_			D 10 ((07)			•
Histosol			Dark Surface		(CO) (N	U D A 447	2 cm Muck (A10) (MLRA 147)
	oipedon (A2)		Polyvalue Be Thin Dark Su				148) Coast Prairie Redox (A16) (MLRA 147, 148)
Black Hi	en Sulfide (A4)		Loamy Gleye			47, 140)	Piedmont Floodplain Soils (F19)
	d Layers (A5)		Z Depleted Mat	,	r <i>z)</i>		(MLRA 136, 147)
	ick (A10) (LRR N)		Redox Dark S	. ,	·6)		Very Shallow Dark Surface (TF12)
	d Below Dark Surfac	e (A11)	Depleted Dar	,	,		Other (Explain in Remarks)
	ark Surface (A12)	- (Redox Depre				
	lucky Mineral (S1) (L	.RR N,	Iron-Mangan			LRR N,	
MLRA	\ 147, 148)		MLRA 13	6)			
	Bleyed Matrix (S4)		Umbric Surfa				³ Indicators of hydrophytic vegetation and
	Redox (S5)		Piedmont Flo				
	Matrix (S6)		Red Parent N	/laterial (F	21) (MLR .	A 127, 147	7) unless disturbed or problematic.
Restrictive I	Layer (if observed):						
Type:							
Depth (in	ches):		<u> </u>				Hydric Soil Present? Yes X No No
Remarks:							

Project/Site: Cumberland County Property	City/County: Cumberland County Sampling Date: 4/31/2018
Applicant/Owner: CWV, LLC; c/o James H. Martin	State: VA Sampling Point: <u>DP-27, UPL</u>
Investigator(s): Hannah L. Miller	Section, Township, Range: Tax Map #38-A-7
• ()	Local relief (concave, convex, none): Slope (%): 1-3%
	670227 Long: -78.113907052 Datum:
Soil Map Unit Name: Chewacla and Monocan soils	NWI classification: UPL
Are climatic / hydrologic conditions on the site typical for this time	
Are Vegetation, Soil, or Hydrology signific	\checkmark
Are Vegetation, Soil, or Hydrology natural	
Are vegetation, on Trydiology hatdran	y problematic: (if needed, explain any answers in remarks.)
SUMMARY OF FINDINGS – Attach site map show	ving sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No_X	Is the Sampled Area
Hydric Soil Present? Yes No_X	io tito campioa / ti ca
Wetland Hydrology Present? Yes No X	
Remarks:	
Data point was taken adjacent to flag O-294.	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that ap	
	tic Plants (B14) Sparsely Vegetated Concave Surface (B8)
	Sulfide Odor (C1) Drainage Patterns (B10)
	Rhizospheres on Living Roots (C3) Moss Trim Lines (B16)
	of Reduced Iron (C4) Dry-Season Water Table (C2)
	n Reduction in Tilled Soils (C6) Crayfish Burrows (C8)
	Surface (C7) Saturation Visible on Aerial Imagery (C9)
	Dlain in Remarks) Stunted or Stressed Plants (D1)
Iron Deposits (B5)	Geomorphic Position (D2)
Inundation Visible on Aerial Imagery (B7)	Shallow Aquitard (D3)
Water-Stained Leaves (B9) Aquatic Fauna (B13)	Microtopographic Relief (D4) FAC-Neutral Test (D5)
Field Observations:	FAC-Neutral Test (D3)
Surface Water Present? Yes No _X_ Depth (inc	shas).
Water Table Present? Yes No _X Depth (inc	· ·
Saturation Present? Yes No X Depth (inc	,
Saturation Present? Yes NoX Deptit (includes capillary fringe)	ches): NoX
Describe Recorded Data (stream gauge, monitoring well, aerial p	photos, previous inspections), if available:
Remarks:	

EGETATION (Five Strata) – Use scientific na	mes of p	plants.		Sampling Point: DP-27, UPL
20'v20'	Absolute	Dominant		Dominance Test worksheet:
Tree Stratum (Plot size: 20'x20')		Species?		Number of Dominant Species
1. Liriodendron tulipfera	20%	YES	FACU	That Are OBL, FACW, or FAC: 1 (A)
2. Fagus grandifolia	15%	YES	FACU	Total Number of Dominant
3				Species Across All Strata: 6 (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 16% (A/B)
6				Prevalence Index worksheet:
		= Total Cove		
50% of total cover: <u>17.5</u>	<u>%</u> 20% of	total cover:	7%	
Sapling Stratum (Plot size: 20'x20'				
1. Ilex opaca	15%	YES	FAC	FACW species 0 x 2 = 0
2. Fagus grandifolia		YES	FACU	FAC species 15 x 3 = 45
3				FACU species 65 x 4 = 260
4				UPL species 20 x 5 = 100
5				Column Totals: <u>100</u> (A) <u>400</u> (B)
6.				Prevalence Index = B/A = 4.00
0	25%	= Total Cove		
12.5				Hydrophytic Vegetation Indicators:
50% of total cover: 12.5	<u>1</u> 20% of	total cover:	5%	1 - Rapid Test for Hydrophytic Vegetation
Shrub Stratum (Plot size: 20'x20')				2 - Dominance Test is >50%
1				3 - Prevalence Index is ≤3.0 ¹
2				4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
3				Problematic Hydrophytic Vegetation (Explain)
4				Problematic hydrophytic vegetation (Explain)
5				1 c
6				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
		= Total Cove	er	Definitions of Five Vegetation Strata:
50% of total cover:	20% of	total cover		Definitions of Five Vegetation Otrata.
Herb Stratum (Plot size: 20'x20')	2070 01	total cover.		Tree – Woody plants, excluding woody vines,
	20%	YES	EACH	approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).
•	200/	YES	<u>FACU</u> UPL	
2. Podophyllum peltatum	20%	155		Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less
3				than 3 in. (7.6 cm) DBH.
4				
5				Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.
6				approximately 3 to 20 ft (1 to 6 fff) in fleight.
7				Herb – All herbaceous (non-woody) plants, including
8				herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3
9				ft (1 m) in height.
10				Man harden Allemander in a consultant of height
11				Woody vine – All woody vines, regardless of height.
		= Total Cove	er	
50% of total cover: 20%				
Woody Vine Stratum (Plot size: 20'x20')	2070 01	total cover.	070	
1				
2				
3				
4				
5				Hydrophytic
	:	= Total Cove	er	Vegetation
50% of total cover:	20% of	total cover:		Present? Yes No_X
Remarks: (Include photo numbers here or on a separate s	heet.)			

Sampling Point: DP-27, UPL

Depth	Matrix		Redox Features	2
(inches)	Color (moist)	<u>%</u>	Color (moist) % Type ¹ Loc	
0-4	10YR 5/2	100		Sandy Loam
4-12	10YR 6/4	100		Sandy Loam
12-18	10YR 6/6	100		Sandy C. Loam
				
				_
				<u> </u>
	ncentration D-De	nletion PM-P	educed Matrix, MS=Masked Sand Grains.	² Location: PL=Pore Lining, M=Matrix.
ydric Soil I		spietion, Kivi=K	educed Matrix, MS=Masked Sarid Grains.	Indicators for Problematic Hydric Soils ³ :
_ Histosol			Dark Surface (S7)	2 cm Muck (A10) (MLRA 147)
	ipedon (A2)		Polyvalue Below Surface (S8) (MLRA	
Black His			Thin Dark Surface (S9) (MLRA 147, 14	· · · · · · · · · · · · · · · · · · ·
	n Sulfide (A4)		Loamy Gleyed Matrix (F2)	Piedmont Floodplain Soils (F19)
	Layers (A5)		Depleted Matrix (F3)	(MLRA 136, 147)
	ck (A10) (LRR N)	(4.4.4)	Redox Dark Surface (F6)	Very Shallow Dark Surface (TF12)
	l Below Dark Surfa rk Surface (A12)	ice (A11)	Depleted Dark Surface (F7)Redox Depressions (F8)	Other (Explain in Remarks)
	ucky Mineral (S1)	(I RR N	Iron-Manganese Masses (F12) (LRR N	1
	147, 148)	(Litti it,	MLRA 136)	•
	leyed Matrix (S4)		Umbric Surface (F13) (MLRA 136, 122) ³ Indicators of hydrophytic vegetation and
Sandy R	edox (S5)		Piedmont Floodplain Soils (F19) (MLR	A 148) wetland hydrology must be present,
	Matrix (S6)		Red Parent Material (F21) (MLRA 127)	unless disturbed or problematic.
estrictive L	ayer (if observed	l):		
Type:			<u> </u>	
_	ches):		<u> </u>	Hydric Soil Present? Yes No X
Depth (inc	,			
	, 			
	, 			
	, <u> </u>			
Depth (inc				